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A

UNIVERSAL FORMULARY:

CONTAINING THE METHODS OF

PREPARING AND ADMINISTERING

OFFICINAL AND OTHER MEDICINES.

THE WHOLE ADAPTED TO

PHYSICIANS AND PHARMACEUTISTS.

BY

R. EGLESFELD GRIFFITH, M.D.

THIRD EDITION,

CAREFULLY REVISED AND MUCH ENLARGED,

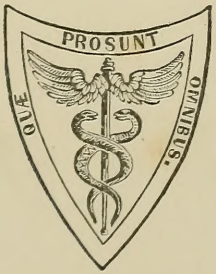
BY

JOHN M. MAISCH, PHAR.D.,

PROFESSOR OF MATERIA MEDICA AND BOTANY IN THE PHILADELPHIA COLLEGE OF PHARMACY.

WITH ILLUSTRATIONS.

Selecta sunt quæ medicum nobilitant.—LINNÆUS.



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TO

GEORGE B. WOOD, M.D.,

AND

FRANKLIN BACHE, M.D.,

AUTHORS OF

"*THE DISPENSATORY OF THE UNITED STATES OF AMERICA,*"

This Work

IS RESPECTFULLY DEDICATED,

BY THEIR FRIEND

R. E. G.

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PREFACE TO THE THIRD EDITION.

In preparing this new Edition, the editor has endeavored to adhere as closely as possible to the plan of the work as adopted by its author, and by its former editor, the late Professor Robert P. Thomas. The consolidation of the London, Edinburgh, and Dublin Pharmacopœias into the present British Pharmacopœia rendered a careful revision of the formulas of the former three authorities necessary. Those only have been retained in the present edition, which were not superseded by formulas of the new official standard for Great Britain, and still appeared to possess sufficient interest and merit. Precisely the same course has been adopted with regard to the formulas derived from the old pharmacopœias of the German principalities which have been superseded by the Pharmacopœia Germanica recently issued. For all the important preparations, it was deemed advisable to give as briefly as possible their relative strength as adopted by the latest pharmacopœias of the United States, Great Britain, France, and Germany. The formulas selected from the last-named two works are given in the original *in parts by weight*, and this feature has been retained in all cases where the proportions are simple, such as can be easily followed with the weights in use in this country; all the more complicated formulas, however, have been calculated into the weights and measures of the United States.

The numerous improvements in manipulations and processes have been carefully noted, and the new remedies of acknowledged merit and importance duly noticed, while quite a number of antiquated formulas have been dismissed from the present edition. Notwithstanding this, the increase in the formulary alone amounts to considerably more than one hundred pages; and in order to not increase the work beyond proper limits, the plan has been adopted to state the forms in which many remedies are best

exhibited in extemporaneous preparations, instead of copying prescriptions adapted to special cases.

The alterations and additions to other parts of the work will be readily noticed, though they are not specially marked.

The editor hopes that the labor bestowed upon this edition may render the work as useful for the present wants of the physician and pharmaceutist as the previous editions have proved themselves.

PHILADELPHIA, December, 1873.

PREFACE TO THE FIRST EDITION.

The design of this work is to present a compendious collection of formulæ and pharmaceutic processes, with such additional information as may render it useful to the physician and apothecary; and the principal aim has been to select materials most generally applicable, and of practical utility. The sources from which they have been derived are very numerous, as will be seen by a reference to the various authorities cited.

The introduction contains tables and observations on the weights and measures employed for pharmaceutical purposes in the United States and in foreign countries, and an explanation or vocabulary of the principal abbreviations and Latin terms used by physicians in writing prescriptions, followed by observations on the management of the sick-room, with rules for the administration of the different classes of medicines.

The formulary is arranged alphabetically, according to the pharmaceutic names adopted in the United States Pharmacopœia; but in each formula, the English appellations for the articles composing it are used, and the quantities of these ingredients are expressed in words, and not in the usual pharmaceutic signs.

These innovations may, and probably will, be objected to by many; but we feel convinced that a change has become requisite, and that fewer mistakes would be committed by physicians in writing prescriptions, both in the names of the ingredients and in the quantities, were they given at length, and in common language, instead of in the abbreviated cabalistic terms now used. In France this change has been made, and it is full time that other countries should follow her example.

In this portion of the work, the compiler has derived much important assistance from several of his friends, and is under great obligation to Mr.

Wm. Procter, Jr., for numerous formulæ and many useful suggestions. He, also, is much indebted to Dr. Robert Bridges for his attentive revision of the sheets, as well as for some important corrections.

The various tables which follow, it is hoped, will add to the value of the work. The observations and directions on officinal preparations are given in as concise a form as possible; and are, for the most part, condensed from the excellent edition of *Mohr and Redwood's Pharmacy*, as edited by Mr. Wm. Procter, Jr. To this is added a short view of the action of poisons, with the best means of obviating their effects.

To facilitate a reference to the contents of the work, copious indices have been added, not only of the formulæ, but of the diseases for which they have been advised.

In the botanical portion, the author has been obliged to cite, in almost every instance, his "Medical Botany." This has arisen from the fact, that no other work of a general character on medicinal plants has been issued from the American press.

Philadelphia, March, 1850.

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A UNIVERSAL FORMULARY.

INTRODUCTION.

Before entering upon the main object of the work, some introductory observations are required, on the forms in which remedial substances are administered, the processes to be pursued in their preparation, and on the weights and measures employed in the proper apportionment of the ingredients, and in the regulation of the doses to be administered.

WEIGHTS AND MEASURES.

These vary much in different countries, and even in the same country. Thus, in Great Britain and the United States, there are three standards of weight recognized and employed: the Avoirdupois, the Troy, and the Apothecaries'.

Weights of the United States and Great Britain.

Avoirdupois Weight.

This is the common standard employed in the selling or buying of such articles as are measured by weight, and is also in use among apothecaries in this country, except in the compounding and dispensing of medicines.

						Equal to troy grains.
1 drachm						27.34375
16 =	1 ounce					437.5
256 =	16 =	1 pound				7000.
3584 =	224 =	14 =	1 stone			98000.
28672 =	1792 =	112 =	8 =	1 hundred weight		784000.
473440 =	35840 =	2240 =	160 =	20 =	1 ton	15680000.

In weighing many articles, what is called the short ton, or 2000 pounds, is employed.

Troy Weight

Is used in the sale of gold, silver, platina, and precious stones.

1 grain
24 = 1 pennyweight
480 = 20 = 1 ounce
5760 = 240 = 12 = 1 pound.

The following are the relative proportions between the troy and the avoirdupois:—

One pound troy is equivalent to 0.822857 pound avoirdupois, or 13 ounces, 2 drachms, 1 scruple, 8.7 grains. [13 ounces, 72.5 grains.]

One ounce troy is equivalent to 1 ounce, 1 drachm, 1 scruple, 6.225 grains avoirdupois.

One pound avoirdupois is equivalent to 1.215277 pound troy, or 1 pound, 2 ounces, 4 drachms, and 2 scruples.

One ounce avoirdupois is equivalent to 7 drachms, 17.5 grains troy.

144 pounds avoirdupois are equivalent to 175 pounds troy.

175 ounces troy are equivalent to 192 ounces avoirdupois.

The following table of equivalents in troy and avoirdupois weight, derived from Redwood's edition of Gray's Supplement to the Pharmacopœia, will be found useful in making these calculations.

EQUIVALENTS IN TROY AND AVOIRDUPOIS WEIGHT.

Troy grains.	Troy.				Avoirdupois.		
	lbs.	oz.	drs.	grs.	lbs.	oz.	grs.
60			1				60
120			2				120
240			4				240
437.5			7	17.5		1	
480		1				1	42.5
875		1	6	35		2	
960		2				2	85
1312.5		2	5	52.5		3	
1440		3				3	127.5
1750		3	5	10		4	
1920		4				4	170
2187.5		4	4	27.5		5	
2400		5				5	212.5
2625.0		5	3	45		6	
2880		6				6	255
3062.5		6	3	2.5		7	
3360		7				7	297.5
3500		7	2	20		8	
3840		8				8	340
3937.5		8	1	37.5		9	
4320		9				9	382.5
4375		9	0	55		10	
4800		10				10	425
4812.5		10		12.5		11	
5250		10	7	30		12	
5280		11				12	30
5687.5		11	6	47.5		13	
5760	1					13	72.5
6125	1	0	6	5		14	
6562.5	1	1	5	22.5		15	
7000	1	2	4	40	1		
7680	1	4			1	1	242.5
9600	1	8			1	5	422.5
10500	1	9	7		1	8	
11520	2				1	10	145
14000	2	5	1	20	2		
17280	3				2	7	217.5
21000	3	7	6	0	3		
23040	4				3	4	290
28000	4	10	2	40	4		
28800	5				4	1	362.5

Troy grains.	Troy.				Avoirdupois.		
	lbs.	oz.	drs.	grs.	lbs.	oz.	grs.
34560	6				4	14	435
35000	6	0	7	20	5		
40320	7				5	12	70
42000	7	3	4	0	6		
46080	8				6	9	142.5
49000	8	6	0	40	7		
51840	9				7	6	215
56000	9	8	5	20	8		
57600	10				8	3	287.5
63000	10	11	2	0	9		
63360	11				9	0	360
69120	12				9	13	432.5
70000	12	1	6	40	10		
74880	13				10	11	67.5
77000	13	4	3	20	11		
80640	14				11	8	140
84000	14	7	0	0	12		
86400	15				12	5	212.5
91000	15	9	4	40	13		
92160	16				13	2	285
97920	17				13	15	357.5
98000	17	0	1	20	14		
103680	18				14	12	430
105000	18	2	6	0	15		
109440	19				15	10	65
112000	19	5	2	40	16		
115200	20				16	7	137.5
119000	20	7	7	20	17		
120960	21				17	4	210
126000	21	10	4	0	18		
126720	22				18	1	282.5
132480	23				18	14	355
133000	23	1	0	40	19		
138240	24				19	11	427.5
140000	24	3	5	20	20		
144000	25				20	9	62.5
147000	25	6	2	0	21		
149760	26				21	6	135
154000	26	8	6	40	22		
155520	27				22	3	207.5
161000	27	11	3	20	23		
161280	28				23	0	280
167040	29				23	13	352.5
168000	29	2	0	0	24		
172800	30				24	10	425
175000	30	4	4	40	25		
178560	31				25	8	59
182000	31	7	1	20	26		
184320	32				26	5	131.5
189000	32	9	6	0	27		
190080	33				27	2	204
195840	34				27	15	276.5

Troy grains.	Troy.				Avoirdupois.		
	lbs.	oz.	drs.	grs.	lbs.	oz.	grs.
196000	34	0	2	40	28		
201600	35				28	12	149
203000	35	2	7	20	29		
207360	36				29	9	421.5
210000	36	5	4	0	30		
230400	40				32	14	275
280000	48	7	2	40	40		
288000	50				41	2	125
345600	60				49	5	412.5
350000	60	9	1	20	50		
403200	70				57	9	262.5
420000	72	11	0	0	60		
460800	80				65	13	113
490000	85	0	6	40	70		
518400	90				74	0	400.5
560000	97	2	5	20	80		
576000	100				82	4	250.5
630000	109	4	4	0	90		
645120	112				92	2	245
700000	121	6	2	40	100		
784000	136	1	2	40	112		

When applied to the compounding or dispensing of medicines, this standard of weight is known as Apothecaries' weight, and differs from the last in the subdivision of the ounce, viz.:—

Apothecaries' Weight.

1 grain
20 = 1 scruple
60 = 3 = 1 drachm
480 = 24 = 8 = 1 ounce
5760 = 288 = 96 = 12 = 1 pound.

To designate these divisions, the following marks are generally used in prescriptions; a grain, gr.; a scruple, ℈; a drachm, ʒ; an ounce, ℥; a pound, ℔.

Since the edition of 1860 the United States Pharmacopœia designates all weights in troyounces and grains; this was deemed necessary on account of the greater simplicity of this method, and in order to avoid confusion when comparing the preparations of this authority with the various pharmacopœias at that time in use in Great Britain, as will be seen from the following table of the

Dublin Weights,

Adopted by the Dublin College in the edition of their Pharmacopœia for 1850:—

1 grain
18.22 = 1 scruple
54.68 = 3 = 1 drachm
437.5 = 24 = 8 = 1 ounce
7000. = 384 = 128 = 16 = 1 pound.

In 1864 the first British Pharmacopœia was published under the direction of the "General Council of Medical Education and Registration of the United

Kingdom;" this, and the later edition of 1867, superseded the pharmacopœias of the London, Edinburgh, and Dublin Colleges, by virtue of parliamentary enactments of 1858 and subsequently, establishing the complete uniformity of medicinal weights throughout Great Britain. They are as follows:—

1 grain
437.5 = 1 ounce
7000. = 16 = 1 pound.

Physicians in the United States and in Great Britain continue to use the symbols ℈ and ℥, which, in both countries, represent, the former 20, and the latter 60 grains.

Foreign Weights.

France.—Anterior to the French Revolution of 1789, the scale of weight used was the *poids de marc*, the unit of which was the pound of Charlemagne, which was equivalent to 7561 troy grains, and was divided as follows:—

Poids de Marc.

	Troy grains.	Grammes.
1 grain =	0.8203 =	3.0531
24 = 1 denier =	19.687 =	1.274
72 = 3 = 1 gros =	59.070 =	3.824
576 = 24 = 8 = 1 once =	472.542 =	30.594
4608 = 192 = 64 = 8 = 1 marc =	3780.500 =	244.753
6912 = 288 = 96 = 12 = 1 livre medicinal =	5670.750 =	367.129
9216 = 384 = 128 = 16 = 1 livre marchand or poid de marc =	7561.000 =	489.505

When the decimal system was introduced by the National Assembly, a new series of measures was adopted, termed the metrical, in which the *metre*, or the ten-millionth part of a quarter of the meridian of the earth, is taken as the unit; this is divided into ten parts, each of which is called a *decimetre*, which in turn is divided into ten *centimetres*. A cubic decimetre is assumed as the unit of measures of capacity, and termed a *litre*. The unit of weight is called a *gramme*, and is a cubic centimetre of distilled water at 39.5 Fahr.

Metrical Weight.

	Troy grains.
1 milligramme =	.015434
10 = 1 centigramme =	.15434
100 = 10 = 1 decigramme =	1.5434
1000 = 100 = 10 = 1 gramme =	15.434
10000 = 1000 = 100 = 10 = 1 decagramme =	154.34
100000 = 10000 = 1000 = 100 = 10 = 1 hectogramme =	1543.4
1000000 = 100000 = 10000 = 1000 = 100 = 10 = 1 kilogram. =	15434.

This system of weights, although adopted by the scientific men of France, was not favorably received by the people generally, who obstinately adhered to the old system of the *poids de marc;* and, although many stringent laws were passed, from time to time, to render the metrical system obligatory, the government in 1812 was forced to make an attempt to amalgamate the two systems, by altering the *livre*, and making it equal to half a kilogramme, assuming this as the unit, and calculating the other divisions from it, according to the old nomenclature. The following table shows the equivalent of the two scales and of avoirdupois:—

FRENCH WEIGHTS OF 1812.

French weights of 1812.		Metrical weight, grammes.		English avoirdupois. lb.	oz.	dr.	grains.
1 livre	=	500	=	1	1	10	6.06
½ "	=	250	=		8	13	3.03
¼ "	=	125	=		4	6	15.19
2 once	=	62.5	=		2	3	7.60
1 "	=	31.25	=		1	1	17.47
½ "	=	15.625	=			8	22.40
2 gros	=	7.812	=			4	11.20
1 "	=	3.906	=			2	5.60
½ "	=	1.9531	=			1	2.80
1 grain	=	0.0542	=				0.837

The adoption of this system was not made obligatory upon the pharmaciens by law until the year 1827; and indeed it appears never to have been generally adopted, the greatest confusion having prevailed with regard to the weights and measures used in the preparation of medicine, as well as in commerce generally, up to the year 1840. In July, 1837, a law was passed which definitely abolished the use of all other weights and measures, excepting those of the metrical or decimal system, from and after August, 1840. The METRICAL WEIGHT, therefore, is now the only one permitted to be used throughout France.

The exact proportion of troy weight to the metrical standard has never been fully and exactly ascertained. In the table previously given, the kilogramme has been considered as equivalent to 15434 grains troy, which is the usual estimate of it. Francœur, however, estimates the pound troy as equal to 392.9986 grammes; Matthieu, Legendre, and Duborg, as equal to 373.0956 grammes; Chelius and Houschild to 373.243 grammes. But the most correct estimation appears to be that of Lochman, who considers 9216 grains poid de marc as equivalent to 7555 grains troy; the pound troy as equal to 7026.320 grains marc and the kilogramme as equal to 15434 grains troy.[1] The subjoined tables are calculated on this estimation:—

VALUE OF TROY WEIGHT IN METRICAL WEIGHT.

One pound	=	373.202	grammes.
One ounce	=	31.10017	"
One drachm	=	3.887521	"
One scruple	=	1.295840	"
One grain	=	0.06479201	"

VALUE OF TROY WEIGHT IN MARC WEIGHT.

One pound	=	12 ounces,	1 gros,	42.32	grains.
One ounce	=	1 once		9.53	"
One drachm	=		1 "	1.19	"
One scruple	=			24.40	"
One grain	=			1.22	"

The other European states used to differ greatly in their medicinal weights, both from the troy standard and among themselves; this difference, however, is rapidly disappearing, partly in consequence of the consolidation of the small European principalities into larger states, like Italy and Germany,

[1] By examination at the English mint the gramme is determined to be 15.434 troy grains. The Bureau of Hydrography in Washington has more recently determined it to be 15.4322, which makes twelve troy ounces = 373.246 grammes. In the above and the subsequent tables we follow the U. S. Pharmacopœia, which gives the value as ascertained by the English weighings. The British Pharmacopœia gives the weight of 1 gramme = 15.432 grains, and of 1 kilogramme = 15432.348 grains.

but chiefly because the French metrical weight has been adopted or its adoption is contemplated in nearly all the states of continental Europe. Besides in France, it is in use, by virtue of legal enactments, in Belgium, Germany, Austria, Hungary, and Switzerland, and its employment is permitted in the adjoining states.

The following synopsis and table will be sufficient to show the variations as they existed about the year 1860; aside from their historical interest, they will serve the important purpose of aiding in readily converting the weights of old formulas into troy weights.

1. The medicinal pound, except in Dublin and Turkey, and by the old poids de marc, was in all of them divided into 12 ounces.

2. In all of them the ounce was divided into 8 drachms, except in Naples, where it contained 10.

3. In all, the drachm was divided into 3 scruples.

4. But the value of the scruple differed. It was composed of 24 grains at Bologna, Coni, Lucca, Modena, Parma, Rome, and in Spain, France, Portugal, Tuscany, and Sardinia;

Of 20 grains in Great Britain (excepting Dublin, where it was 18.22 grains), the United States, Austria, Bavaria, Holland, Poland, Prussia, and Sweden; at Lubeck, Naples, Nuremberg, and Venice;

5. Consequently the pound consisted of

5760 grains in the United States, Great Britain, Austria, Bavaria, Holland, Poland, Prussia, and Sweden; at Lubeck, Nuremberg, and Venice;

6400 grains in Turkey;

6912 grains in Spain, Portugal, Tuscany, Sardinia, Bologna, Lucca, Modena, Parma, Rome, and Coni;

7000 grains in Dublin;

7200 grains at Naples;

9216 grains in France by the poids de marc.

The subjoined table shows the differential values between the troy weight and the medicinal weights of the countries of Europe, calculated in grains:—

COUNTRIES, ETC.	Value of the pound, 5760 grains.	Value of the ounce, 480 grains.	Value of the drachm, 60 grains.	Value of the scruple, 20 grains.	Value of the grain.
Austria[1]	5118.09	426.51	53.31	17.77	0.89
Bavaria[2]	5971.23	497.60	62.20	20.73	1.04
Bologna	7920.93	660.08	82.51	27.50	1.38
Coni	8392.40	699.37	87.42	29.14	1.46
Corte	7807.42	650.62	81.33	27.11	1.36
Holland[3]	5732.38	477.70	59.71	19.90	1.00
Lubeck	5823.60	485.30	60.66	20.22	1.01
Lucca	7711.73	642.64	80.33	26.78	1.34
Modena	7576.80	631.40	78.92	26.31	1.32
Monticelli[4]	8334.64	694.55	86.82	28.94	1.45
Naples[5]	8377.11	698.09	87.26	29.09	1.46
Nuremberg[6]	6007.22	500.60	62.58	20.86	1.04

[1] This weight was used in Austria Proper, Bohemia, Moravia, Hungary, Transylvania, Tyrol, and the Lombardo-Venetian kingdom, with the exception of the city of Venice.
[2] This weight has been adopted in Greece.
[3] This weight was also used in Belgium.
[4] Monticelli, Castelvetro, and Polesine.
[5] Kingdom of the Two Sicilies.
[6] After the incorporation of Nuremberg in the kingdom of Bavaria, the Bavarian standard was used in that city. But the Nuremberg weight was still extensively used in Germany, and is yet employed in other countries. In Germany, we found it in the

COUNTRIES, Etc.	Value of the pound, 5760 grains.	Value of the ounce, 480 grains.	Value of the drachm, 60 grains.	Value of the scruple, 20 grains.	Value of the grain.
Parma[1]	7864.55	655.38	81.92	27.31	1.37
Piacenza[2]	8124.20	677.02	84.63	28.21	1.41
Poland	5996.04	499.67	62.46	20.82	1.04
Portugal	7494.62	624.55	78.07	26.02	1.30
Prussia[3]	6128.12	510.68	63.83	21.28	1.06
Rome	7607.72	633.98	79.25	26.42	1.32
Spain	7475.46	622.96	77.87	25.96	1.30
Sweden	6034.48	502.87	62.86	20.95	1.05
Turin	7770.71	647.56	80.94	26.98	1.35
Turkey	7436.78	619.73	77.47	25.82	1.29
Tuscany	7597.21	633.10	79.14	26.38	1.32
Venice	7136.23	594.69	74.34	24.78	1.24

duchies of Saxe-Altenburg and of Anhalt Bernburg; grand duchy of Baden; city of Bremen; duchies of Brunswick, Saxe Meiningen, and Saxe Coburg Gotha; cities of Frankfort-on-the-Maine and Hamburg; kingdom of Hanover; electorate of Hesse, grand duchy of Hesse, landgraviate of Hesse Homburg; principality of Hohenzollern Sigmaringen; duchy of Nassau; grand duchy of Oldenburg; principalities of Reuss-Plauen and Reuss-Schleitz, of Schwartzburg-Rudolstadt, and Schwartzburg-Sonderhausen; duchy of Sleswick-Holstein; principality of Waldeck; grand duchy of Saxe-Weimar; and kingdom of Wirtemberg.

The Nuremberg standard was also adopted in Denmark, Norway, Finland, Russia, and Switzerland.

[1] Parma, Borgo San-Dannino, Pellegrino, San-Secondo, Fontanellato, and Bussetto.

[2] Piacenza, Fiorenzola, and Carpaneta.

[3] This standard had been adopted in the kingdom of Saxony, the principalities of Lippe-Detmold and Lippe-Schaumburg, and the duchy of Anhalt-Dessau. It differs so little from those of Anhalt-Coethen and the grand duchies of Mecklenburg-Schwerin and Mecklenburg-Strelitz that the former standard of these three territories may be considered identical with that of Prussia.

This table needs hardly any explanation: it will enable the pharmaceutist—in all cases of foreign formulæ—to calculate the foreign weight in troy weight; thus, *e. g.*, one grain troy being equal to 0.89 grain of Austria, the value of one grain Austrian weight in troy weight may be readily ascertained by a simple rule-of-three example:—

$$0.89 : 1 :: 1$$
$$1 \times 1 = \times 1 = 0.100$$

$$0.89)0.100(1.1235$$
$$89$$
$$110$$
$$89$$
$$210$$
$$178$$
$$320$$
$$267$$
$$530$$
$$445$$
$$65$$

The value of these various pounds in grammes is thus calculated by Jourdain:—

	Grammes.
The pound of 5760 grains.	
Venice	= 301.230
Prussia	= 350.761
Sweden	= 356.227
Nuremberg	= 357.843
Poland	= 358.510
Bavaria	= 360.000
Lubeck	= 369.126
United States and Great Britain	= 373.202
Holland	= 375.000
Austria	= 420.009
The pound of 6400 grains.	
Turkey	= 321.317
The pound of 6912 grains.	
Coni	= 307.370
Monticelli	= 307.370
Piacenza	= 317.577
Bologna	= 325.665
Soragna	= 325.800
Parma	= 328.000
Corte	= 330.400
Turin	= 331.961
Lucca	= 334.500
Rome	= 339.073
Tuscany	= 339.542
Modena	= 340.457
Portugal	= 344.190
Spain	= 345.072
The pound of 7200 grains.	
Naples	= 320.230
The pound of 9216 grains.	
France	= 489.503

The following tables are taken, slightly modified, from the United States Pharmacopœia; they will be found useful for converting the apothecaries' and metrical weights one into the other.

RELATION OF WEIGHTS OF THE U. S. PHARMACOPŒIA TO METRICAL WEIGHTS.

Grain.	Milligrammes.	Grains.	Grammes.	Apothecaries' w't.	Grammes.
$\frac{1}{64}$ =	1.012	i =	0.0648	℥i =	3.887
$\frac{1}{60}$ =	1.079	ij =	0.1295	℥ij =	7.775
$\frac{1}{50}$ =	1.295	iij =	0.1943	℥iij =	11.663
$\frac{1}{48}$ =	1.349	iv =	0.2591	℥iv =	15.550
$\frac{1}{40}$ =	1.619	v =	0.3239	℥v =	19.438
$\frac{1}{36}$ =	1.799	vi =	0.3887	℥vi =	23.325
$\frac{1}{32}$ =	2.025	vij =	0.4535	℥vij =	27.213
$\frac{1}{30}$ =	2.159	viij =	0.5183	ʒi =	31.100
$\frac{1}{25}$ =	2.591	ix =	0.5831	ʒij =	62.200
$\frac{1}{24}$ =	2.699	x =	0.6479	ʒiij =	93.300
$\frac{1}{20}$ =	3.239	xij =	0.7775	ʒiv =	124.401
$\frac{1}{16}$ =	4.049	xv =	0.9718	ʒv =	155.501
$\frac{1}{15}$ =	4.319	xvi =	1.036	ʒvi =	186.601
$\frac{1}{12}$ =	5.399	xviij =	1.166	ʒvij =	217.701
$\frac{1}{10}$ =	6.479	xx =	1.295	ʒviij =	248.801
$\frac{1}{8}$ =	8.098	xxiv =	1.555	ʒix =	279.902
$\frac{1}{6}$ =	10.798	xxv =	1.619	ʒx =	311.002
$\frac{1}{5}$ =	12.958	xxx =	1.943	ʒxi =	342.102
$\frac{1}{4}$ =	16.197	xl =	2.591	℔i =	373.202
$\frac{1}{3}$ =	21.597	l =	3.239	℔ij =	746.404
$\frac{1}{2}$ =	32.395	lx =	3.887	℔iij =	1119.606

RELATION OF METRICAL WEIGHTS TO WEIGHTS OF THE U. S. PHARMACOPŒIA.

Grammes.	Exact equivalent in grains.	Approximate equivalent in grains.	Grammes.	Exact equivalent in grains.	Approximate equivalent in troy weight.
0.001	.0154	$\frac{1}{65}$	1	15.434	gr. xv
0.002	.0308	$\frac{1}{32}$	2	30.868	ʒss
0.003	.0463	$\frac{1}{22}$	3	46.302	℈ij
0.004	.0617	$\frac{1}{16}$	4	61.736	ʒi
0.005	.0771	$\frac{1}{13}$	5	77.170	℈iv
0.006	.0926	$\frac{1}{11}$	6	92.604	ʒiss
0.007	.1080	$\frac{1}{9}$	7	108.038	℈vss
0.008	.1234	$\frac{1}{8}$	8	123.472	ʒij
0.009	.1389	$\frac{1}{7}$	9	138.906	℈vij
0.01	.1543	$\frac{1}{6}$	10	154.340	ʒijss
0.02	.3086	$\frac{1}{3}$	20	308.680	ʒv
0.03	.4630	$\frac{6}{13}$	30	463.020	ʒvij ℈ij
0.04	.6173	$\frac{7}{11}$	40	617.360	ʒx ℈i
0.05	.7717	$\frac{3}{4}$	50	771.701	ʒxiij
0.06	.9260	$\frac{9}{10}$	60	926.041	ʒxvss
0.07	1.0803	1	70	1080.381	ʒxviij
0.08	1.2347	$1\frac{1}{4}$	80	1234.721	ʒxxss
0.09	1.3890	$1\frac{1}{3}$	90	1389.062	ʒxxiij
0.1	1.543	$1\frac{1}{2}$	100	1543.402	ʒiij ℈v
0.2	3.086	3	200	3086.804	℥vi ʒiij
0.3	4.630	$4\frac{1}{2}$	300	4630.206	℥ix ʒv
0.4	6.173	6	400	6173.609	℔i ʒvij
0.5	7.717	$7\frac{1}{2}$	500	7717.011	℔i ℥iv
0.6	9.260	9	600	9260.413	℔i ℥vij
0.7	10.803	11	700	10803.816	℔i ℥x ʒiv
0.8	12.347	$12\frac{1}{2}$	800	12347.218	℔ij ʒi ʒv
0.9	13.890	14	900	13890.620	℔ij ℥v
			1000	15434.023	℔ij ℥viij

LIQUID MEASURES OF THE UNITED STATES AND GREAT BRITAIN.

The liquid measures employed by the apothecaries in the United States are the wine gallon and its subdivisions.

WINE OR APOTHECARIES' MEASURE.

(*Adopted in the United States Pharmacopœia.*)

					Cubic inches.	Grains troy.
1 minim, ♏						0.95
60 =	1 fluidrachm, f. ʒ				= 0.2256 =	56.96
480 =	8 =	1 fluidounce, f. ℥			= 1.8047 =	455.69
7680 =	128 =	16 =	1 pint, O		= 28.875 =	7291.11
61440 =	1024 =	128 =	8	= 1 gallon, Cong. = 231.		= 58328.88

For a long time, the Royal Colleges of Physicians in England, Scotland, and Ireland declined to recognize the use of measures in preparing and dispensing medicines, on the ground that the varying densities of different fluids rendered it difficult to use one common measure for all without risk of serious errors. But as druggists and medical practitioners constantly employed measures, in defiance of the prohibition, and as the practice, besides being attended with great and obvious convenience, was found to be less fraught with danger than had been conceived, the London College in the first instance, and subsequently the other colleges also, recognized a system of measures of

their own, founded on the standard measures of the country. The same standard has been adopted by the British Pharmacopœia; its basis is the imperial pint of 1826, which is divided into twenty parts, called fluidounces; each of which corresponds exactly with an avoirdupois ounce of distilled water at 62° F. and 30° bar., and therefore contains 437.5 grains troy. The fluidounce is subdivided into eight parts of 54.6875 grains, termed fluidrachms; and each of these consists of sixty parts, called minims, which therefore amount each in weight to 0.91146 troy grain of distilled water.

Imperial Measure.

(*Adopted by the British Pharmacopœia.*)

						Grains troy.		Avoirdupois.
1 minim						= 0.91		
60 =	1 fluidrachm					= 54.7		
480 =	8	"	1 fluidounce			= 437.5	=	1 oz.
9600 =	160	" =	20	"	= 1 pint	= 8750.	=	1.25 lb.
76800 =	1280	" =	160	"	= 8 "	= 1 gallon = 70000.	=	10 lbs.

Value of Wine or Apothecaries' Measure in Imperial Measure.

Wine Measure.		Imperial Measure. Pints.	Fluidounces.	Fluidrachms.	Minims.
1 gallon	=	6	13	2	23
1 pint	=		16	5	18
1 fluidounce	=		1	0	20
1 fluidrachm	=			1	2.5
1 minim	=				1.04

Value of Imperial Measures in Wine or Apothecaries' Measure.

	Gallon.	Pints.	Fluidounces.	Fluidrachms.	Minims.
1 gallon	1	1	9	5	8
1 pint		1	3	1	38
1 fluidounce			7		41
1 fluidrachm					58
1 minim					0.9

None of the pharmacopœias of continental Europe permit the use of measures either in making preparations or in compounding prescriptions; those which have been recently issued give, like the French Codex, all quantities in parts, which invariably means parts by weight. This has been adhered to in this Formulary in all cases where these parts by weight could not conveniently be converted into weights and measures of the U. S. Pharmacopœia. The employment of weights to the entire exclusion of measures has, particularly in making chemical and pharmaceutical preparations, so many advantages over the use of measures, and is so much more accurate, that those who have become accustomed to their use will not abandon them in favor of the latter whenever the nature of the preparation or the officinal directions will permit. In France, where the relation between weight and measure is so very close (see page 21), water may be measured, if at or near the temperature of 40° F.

Besides these regular and authorized measures, there are others constantly used in the preparation and administration of medicines, which require notice. These, which have been adopted for convenience, are far from being uniform, but may be used without danger for ordinary purposes. Drs. Wood and Bache estimate the

Teacup	as containing about	four	fluidounces.
Wineglass	"	"	two fluidounces.
Tablespoon	"	"	a half a fluidounce.
Teaspoon	"	"	a fluidrachm.

Dr. Christison gives a somewhat different calculation; he considers a

Tumbler	to contain	eight fluidounces.
Breakfast cup	"	" "
Teacup	"	five fluidounces.
Wineglass	"	two fluidounces.
Tablespoon	"	half a fluidounce.
Dessertspoon	"	two fluidrachms.
Teaspoon	"	one fluidrachm.

In both these estimates, the teaspoon is rated too low; they apply very well to the teaspoon formerly used, but not to the much larger kind now in general use, which approaches the dessertspoon in capacity. Quart and pint bottles are also sometimes employed as measures of capacity for medical purposes; but they are very fallacious guides of quantity, as the so-called quart wine bottle never holds a quart, nor the misnamed pint wine bottle a pint. The first seldom holds more than twenty-six to twenty-seven fluidounces, and the latter from thirteen to fourteen.

It is still more common to estimate small quantities or doses of medicine by drops, as representing, and equivalent to, minims. This is so convenient, that it is not likely to be abandoned, though nothing can be more erroneous, as the size of the drop of the same fluid varies much with the form of the mouth of the bottle, its size, the mode in which the operation is performed, the temperature, and still more from the nature of the fluid thus attempted to be measured. Numerous experiments have been made on the subject, but can only be considered as approximate estimates, though sufficiently accurate for practical purposes.

Mr. Alsop, of London, some years since, published the result of some experiments made by him, which show the great variation to which this mode of measuring is liable. The following proves that the number of drops required to measure a fluidrachm are widely different when dropped from a large or a small bottle.

One fluidrachm.	Large bottle.	Small bottle.
Diluted sulphuric acid	24 drops.	84 drops.
Scheele's hydrocyanic acid	35 "	70 "
Distilled water	31 "	54 "
Solution of ammonia	40 "	48 "
Tincture of opium	84 "	135 "
Rectified spirit	100 "	130 "
Tincture of chloride of iron	100 "	150 "

Mr. Durand, of Philadelphia, in an able paper on the subject (*Journal Phila. Col. of Pharm.*, vol. i. p. 165), says, "The bulk of drops depends not only on the density of the liquids which furnish them, and the cohesion of the constituent particles of that liquid, but also on the shape of the mouth of the vessel from which they are poured. An open vessel with a beak, such as the common graduated measure, affords a larger drop than a bottle with the stopper half drawn out; a mode commonly practised. That furnished by the dropping-tube is still smaller, and is ever liable to vary with the greater or lesser diameter of its extremity. Besides, in every instance, the first drops poured from any vessel are always smaller than those subsequently obtained."

He goes on to say that the following may be considered as established:—

1. That liquids which contain a small proportion of water afford a small drop; while, on the contrary, liquids containing a large quantity of water furnish a large drop. For instance, concentrated acids, ethers, rectified alcohol, fixed and essential oils, etc., which contain a very small proportion of water, yield a smaller drop than diluted acids, weak alcohol, wine, etc.

2. That, among liquids containing a large proportion of water, those which are not charged with remedial substances give a larger and heavier drop than those same liquids containing extraneous bodies in solution. Thus, weak alcohol, wine, vinegar, and water furnish a larger and heavier drop than the tinctures prepared from them.

The following table illustrates his remarks:—

TABLE

Showing the Difference between Minims, Drops, and Grains of various Medicinal Liquid Preparations of the Pharmacopœia of the United States, etc.

PREPARATIONS.	No. of drops in 20 minims.	No. of min. in 20 drops.	No. of drops in 20 grains	No. of grains in 20 drops.
Sulphuric acid	30	13.3	25	16
Sulphuric ether	50	8	60	6
Rectified alcohol	46	8.6	57	7.1
Nitric acid	28	14.2	22.2	18
Acetic acid (crystallizable)	40	10	40	10
Muriatic acid	18	22.2	18.1	22
Oil of wormseed (chenopod. anthelminticum)	40	10	50	8
of peppermint, anise, sweet almond, olive, palma christi	40	10	43.5	9
of cloves	40	10	36	11
of cinnamon	40	10	32	12.5
Copaiba	40	10	40	10
Diluted alcohol	40	10	42	9.5
Tincture of iodide of potassium, cantharides, kino, digitalis, assafetida, sulphuric acid, colchicum, opium, valerian, guaiacum	40	10	43	9.3
of valerian, guaiacum (volatile)	40	10	50	8
of chloride of iron	44	9.1	50	8
Wine, Teneriffe	26	15.3	25	16
antimonial	24	16.6	26	15.3
of opium (Sydenham's laudanum)	26	15.3	29	13.7
of colchicum root and seeds	25	16	29	13.7
Vinegar, distilled	19	21	20	20
of opium (black drop), of colchicum, of squill	26	15.3	25	16
Water, distilled	15	26.6	17.5	24.5
solution of hydrocyanic acid	15	26.6	17.5	24.5
sulphuric acid (1 to 7)	17	23.5	17	23.5
nitric " "	17	23.5	17	23.5
ammonia (strong)	18	22.2	18.5	22
" (weak)	15	26.6	20	20
iodide of potassium	18	22.2	20	20
arsenite of potassium	19	21	20	20

The only mode to obviate these discrepancies is for the physician to order the administration of small quantities of fluid medicines in minims, and not

in drops, which would induce the use of a minim measure in every sick room.

FRENCH MEASURES OF CAPACITY—APOTHECARIES' MEASURE.

1 millilitre or cubic centimetre							=	16.2318 minims.
10=	1 centilitre						=	2.7053 fl. dr.
100=	10=	1 decilitre					=	3.3816 fl. ounces.
1000=	100=	10=	1 litre				=	2.1135 pints.
10000=	1000=	100=	10=	1 decalitre			=	2.6419 gallons.
100000=	10000=	1000=	100=	10=	1 hectolitre.		=	26.4190 "
1000000=	100000=	10000=	1000=	100=	10=	1 kilolitre	=	264.1900 "

Litres.		Eng. cubic inches.		Imperial pints.		Wine pints.		Troy ounces of water.
1	=	61.028	=	1.7608	=	2.1135	=	32.104
2	=	122.056	=	3.5216	=	4.2270	=	64.208
3	=	183.084	=	5.2822	=	6.3405	=	96.312
4	=	244.112	=	7.0430	=	8.4541	=	128.416
5	=	305.140	=	8.8038	=	10.5676	=	160.520
6	=	366.168	=	10.5646	=	12.6811	=	192.624
7	=	427.196	=	12.3253	=	14.7947	=	224.728
8	=	488.224	=	14.0861	=	16.9082	=	256.832
9	=	549.252	=	15.8469	=	19.0217	=	288.936

The former measure in use before the introduction of the metrical system was the *pint*, and its subdivisions; and it still continues to be employed in some parts. It agrees with the metrical measure as follows:—

1 demi-poisson	=	62.50 grammes	=	0 litre	0 decilitre	6.25 centilitre.
1 poisson	=	125	=	0 "	1 "	2.5 "
1 demi-setier	=	250	=	0 "	2 "	5 "
1 chopine	=	500	=	0 "	5 "	0 "
1 pinte	=	1000	=	1 "	0 "	0 "

The subjoined is a list of the principal liquid measures[1] of Europe, with their corresponding value in the metrical measure of France:—

AUSTRIA.—The fundamental unity is the *mass* or *kanne* = 71.3343 Par. cubic inches, or 1.415015 litre. The mass is divided into 3 seidel, and 40 mass make one eimer.

BADEN.—The fundamental unity is the *mass* = 1.5 decimetre cubic, and accordingly equivalent to 1.5 litre.

BAVARIA.—The fundamental unity is the mass = 43 decimal cubic inches of Bavaria, or 1.06921728 litre. The mass is divided into 4 *shoppen*.

DENMARK.—The fundamental unity is the *pott* ($\frac{1}{32}$d part of a cubic foot Danish), equivalent to 0.96529 litre. The pott is divided into four *pegel*, and two potts make a *kanne*.

GRAND DUCHY OF HESSE.—The fundamental unity is the *mass*, which corresponds exactly to 2 litres. The mass is divided into 4 *schoppen*.

NAPLES.—The unity is the *barile*, equivalent to 43.6216 litres.

PORTUGAL.—The unity is the *almude*, equivalent to 16.451 litres.

PRUSSIA.—The unity is the *quart*. This measure has a capacity of 64 cubic inches of distilled water, at 61.25° Fahr. and 27° 10′ barom., = 57.724 cubic inches of Paris, or 1.145 litre.[2]

ROME.—The unity is the *barile*, equivalent to 58.3416 litres.

RUSSIA.—The unity is the *wedro*, which contains 750 cubic inches of dis-

[1] These measures are not employed for pharmaceutical purposes, though they are occasionally made use of in prescriptions, however, merely in the same manner as approximate measures.

[2] In Prussia and the other German States the French litre is at present the unit of the measure of capacity.

tilled water, at 50° Fahr. and 30° barom., = 30 pounds Russian. The wedro is equivalent to 12.28963047 litres, and one litre is accordingly equivalent to 0.081369410776019 wedro. The wedro is divided into 10 *stof*, and the stof into 10 *tschark*.

Spain.—The unity is the *arroba*, equivalent to 16.073 litres.

Sweden.—The fundamental unity is the *kanna*, which contains 100 cubic decimal inches of pure water at 62° Fahr., *in vacuo*, equivalent to 6.151951 pounds Swedish. One pound Swedish of pure water at 62° Fahr., *in vacuo*, is equal to 0.4250104 litre; the *kanna* is consequently equivalent to 2.6146431552904 litres, or, calculated upon the maximum density of water, 2.617341607126 litres, or, in shorter terms, 2.62 litres. The kanna is divided into 2 *stop*, the stop into 4 *quarter*, and the quarter into 4 *jungfrur*.

Turin.—The unity is the *brenta*, divided into 36 pints, and equivalent to 49.28468 litres.

Tuscany.—The unity is the *barile*, equivalent to 45.584 litres.

Wirtemberg.—The unity is the *mass*, which contains 78.125 cubic inches (Wirtemberg measure), and is equivalent to 1.83705 litre. The mass is divided into four *schoppen*.

SPECIFIC GRAVITY.

The following remarks on Specific Gravity have been taken from Redwood's edition to Gray's Supplement, and comprise in a condensed form much useful information.

The determination of the specific gravity of a body consists in estimating the weight of a given volume of it, as compared with an equal volume of some other body. The bodies usually taken as the standard of comparison are *pure water* for solids and liquids, and *atmospheric* air for gases.

The *specific gravity of a solid* is determined first by weighing it in the ordinary manner with an accurate balance suspended in the air; then attaching a horse-hair, or fine silken thread to the solid body, immersing it in pure distilled water, and weighing it while thus immersed. The weight of the body in air, divided by the difference between its weight in air and its weight in water, will be its specific gravity. Thus a piece of lead is found to weigh 398 grains in air. When immersed in water, its weight is 362.4 grains; and the difference between these two weights, namely, 35.6, is the weight of the volume of water displaced by the lead, or of a volume of water equal to that of the lead. The volume of water being taken as unity, the specific gravity of the lead is found by the following rule-of-three sum:—

35.6 : 1 : : 398 : 11.176, the specific gravity of the lead.

In taking the specific gravity of *a solid substance lighter than water*, some modification of the process is required; but we have, nevertheless, the same preliminary points to determine—first, the weight of the substance in air; and secondly, the weight of an equal volume of water. This may be illustrated by taking the specific gravity of a piece of wax. The weight of the wax in air is 105.4 grains. On immersing the wax in water, two pressures are exerted—a pressure downwards, equal to the gravity or weight of the wax, and a pressure upwards, equal to the weight of the volume of water displaced by the wax; but the specific gravity of water being greater than that of wax, the upward pressure preponderates, and the wax rises to the surface. Thus, we find that a volume of water equal to that of the wax weighs as much as the wax, and something more. We must ascertain how much more; and this is done in the following manner: Some body heavier than water, and the weight of which in water is known, is attached to the wax, and the two bodies are weighed in water together. A piece of lead may be used for this purpose. The lead, alone, weighs 378 grains in water; with

the wax attached to it, the weight in water is 372.4 grains, making a difference of 5.6 grains; and this 5.6 grains is equal to the excess of the upward over the downward pressure on the wax, when immersed in water. Thus, a volume of water equal to that of the wax weighs 5.6 grains more than the wax, or 105.4 + 5.6 = 111 grains.

Then, 111 : 1 : : 105.4 : 0.949, the specific gravity of the wax.

It sometimes happens that the solid substance, the specific gravity of which is to be determined, is *in powder*, or *in several small particles*. In such cases, it is found convenient to proceed as in the following method of taking the specific gravity of calomel:—

100 grains of calomel are introduced into a specific gravity bottle, which holds 1000 grains of distilled water; the bottle is filled up with water, and the weight of the contents is found to be 1083.7 grains; deducting the weight of the calomel (100 grains) from this, the remainder (983.7 grains) will be the weight of the water in the bottle, and the difference (16.3 grains) between this and 1000 grains, the weight of the whole contents of the bottle when filled with distilled water, is the weight of a volume of water equal to the volume of the calomel.

Then, 16.3 : 1 : : 100 : 6.03, the specific gravity of the calomel.

In taking the *specific gravity of substances soluble in water*, other modifications of the process are required. Sometimes the substance may be covered with a thin coating of varnish, so as to protect it from the action of the water. This method answers very well for blue pill, which may be brushed over with a strong tincture of mastic, and then proceeded with as in the case of the lead. In other instances, however, it is necessary to pursue a different course. Thus, any powder that is soluble in water must have its specific gravity taken, in the first instance, with reference to some liquid in which it is not soluble. Spirit of wine, oil of turpentine, or olive oil, may be used in such cases. The process may be illustrated by describing the method of taking the specific gravity of guano in oil of turpentine.

In the first place, the specific gravity of the oil of turpentine is ascertained to be 0.874. Then 100 grains of guano are introduced into a specific gravity bottle, as in the case of the calomel; and the bottle being filled up with oil of turpentine, the weight of the contents is found to be 922.7 grains, from which deducting 100 grains, the remainder (822.7 grains) will represent the oil not displaced by the guano; and this, deducted from 874 grains, the quantity of oil the bottle is capable of holding, leaves 51.3 grains as the weight of a volume of oil of turpentine equal to that of the guano. Now, 874 : 51.3 : : 1000 : 58.7, the weight of a volume of water equal to that of the guano.

Then, 58.7 : 1 : : 100 : 1.7, the specific gravity of the guano.

The methods by which the *specific gravities of liquids* are usually determined may be divided into two classes:—

1st. Those which consist in filling any suitable vessel with the liquid to be estimated, ascertaining the weight of the contents, and dividing this by the weight of the same volume of water.

2d. Those which consist in displacing a portion of the liquid by some solid body floating in it, and estimating the specific gravity according to the weight and volume of the substance immersed, as compared with its immersion in water.

In the first case, the instruments employed are a specific gravity bottle and an ordinary balance.

In the second case, the instruments used may be comprehended under the general terms of *hydrometers* or *aërometers*. These, however, are distinguished from each other (for there are many varieties of them) by different names, according to the particular purpose for which they are respectively intended, or from some peculiarity in their construction.

The *specific gravity bottle* affords the most accurate means of determining the comparative densities of liquids. It consists, usually, of a globular bottle with a flat bottom and a slender neck, which holds exactly 1000 grains of distilled water at a certain fixed temperature. It is very easy at any time to test the accuracy of one of these bottles by a single experiment; and, having ascertained that the bottle is correctly adjusted with regard to distilled water, the indications afforded with any other liquid will be equally trustworthy. The weight in grains of the quantity of any liquid filling such bottle will indicate its specific gravity.

Hydrometers, or *aërometers*, are floating instruments, and their application for the purpose of determining the specific gravities of liquids depends upon the fact, that a body immersed in any liquid sustains a pressure from below upwards equal to the weight of the volume of the liquid displaced by such body.

The use of hydrometers for determining the specific gravities of liquids has been traced back to a period about 300 years before Christ; an instrument of this kind being described as the invention of Archimedes, the Sicilian mathematician. It subsequently fell into disuse, but was again brought into notice by Basil Valentine.

There are two kinds of hydrometers, which may be taken as the types of all the different varieties in regard to construction:—

1st. Those which are always immersed in the liquids to be tried, to the same depth, and to which weights are added to adjust the instrument to the density of any particular liquid. Of this description are Fahrenheit's, Nicholson's, and Guyton de Morveau's hydrometers.

2d. Those which are always used with the same weight, but which sink into the liquids to be tried to different depths, according to the densities of the liquids. These usually have graduated scales attached to their stems. Of this description are the common glass hydrometers, generally including those of Baumé, Cartier, Gay Lussac, Twaddle, Zanetti, &c., and the specific gravity beads.

Sikes's and Dicas's hydrometers combine the principles of both types, having movable weights and graduated scales.

Hydrometers may also be divided into two classes, as follows:—

First. Those having a general application, for determining the comparative densities of any liquids.

Second. Those intended for special application; as for estimating the comparative strength of spirits, or the comparative densities of syrups, oils, etc.

Fahrenheit's, Nicholson's, Guyton de Morveau's, and the common glass hydrometers, including Baumé's, Cartier's, Zanetti's, and the specific gravity beads, belong to the first class.

Gay Lussac's, Sike's, and Dicas's hydrometers, the saccharometer, urinometer, and elaëometer, belong to the second class.

Fahrenheit's hydrometer consists of two glass bulbs blown in a glass tube, like a common hydrometer, excepting that the upper bulb is larger, and the stem, which is small, is terminated at the top in a cup or funnel. It has a mark on the middle of the stem, indicating the point at which the instrument is to be made to float, by means of weights put into the cup.

Nicholson's hydrometer is a modification of Fahrenheit's. It is made of brass, and consists of a hollow globe, to which is fixed a slender stem surmounted by a cup; on the opposite side of the globe is another cup fixed in a kind of stirrup, and loaded, so that this may always form the lowest point of the instrument when immersed in any liquid. There is a mark on the middle of the upper stem, indicating the point at which the instrument is to be made to float. A certain weight is introduced into the cup, to cause the instrument to sink to the proper mark in distilled water. On immersing

the hydrometer into any other liquid, more or less weight will have to be put into the cup, according as such liquid is more or less dense than water. Thus the relative densities of liquids are determined.

This instrument is also applicable for taking the specific gravities of solids. If the solid substances be put into the cup, as part of the weight required to sink the hydrometer in distilled water, the weight of the substance in air is ascertained; and if it be then put into the lower cup, immersed in water, and the instrument again adjusted, its weight in water is ascertained; and from these its specific gravity is calculated.

Guyton de Morveau's hydrometer is similar to Fahrenheit's.

Baumé's hydrometers are used extensively in this country, as well as in France, and are applicable for all kinds of liquids. There are two distinct instruments: one for liquids lighter than water, and the other for liquids heavier than water. The latter is, for distinction, called the *acidometer* or *saccharometer* (*pèse-acide* or *pèse-sirop*); the former, the *spirit hydrometer* (*pèse-esprit*).

Baumé's acidometer is made in the form of the common hydrometers. It consists of a glass tube terminated at the lower end by two bulbs, the lowest bulb being much smaller than the other, and intended to contain the ballast with which the instrument is loaded. The scale is marked on a slip of paper, or of ivory fixed in the tube, and is adjusted in the following manner: The top of the tube being open, the slip of paper on which the scale is to be marked is put into the stem, and the instrument is then immersed in pure distilled water; quicksilver is now dropped into the lower ball until the instrument sinks so low in the water that only the top of the stem remains above the surface, and a mark is made on the glass denoting exactly the point to which it sinks. The instrument is now taken out of the pure water and put into a solution of fifteen parts of common salt in eighty-five parts of distilled water, this solution being at the same temperature as the water in which the instrument was previously immersed; the point to which it sinks in this solution is to be marked on the stem as before, and the distance between the two marks being taken with a pair of compasses, and transferred to the slip of paper, the first is made the zero or 0, and the other the 15th degree of the scale. This distance being divided into fifteen equal parts or divisions, each division is called a degree, and the scale is completed by adding as many more degrees as the length of the stem will admit of. This being done, the slip of paper is again introduced into its place, and so fixed that the zero (0) of the scale shall be exactly opposite the first mark made on the glass. The end of the stem is now sealed with the flame of a blowpipe.

Fig. 1.

Common Hydrometer.

Baumé's spirit hydrometer is similar in form to the acidometer; but the weight of the instrument, and the scale, are different. In this case, the hydrometer is first immersed, as before, in pure distilled water; but it is made to float, so that the greater part of the stem shall be above the surface of the water. This point is marked, and the instrument is then transferred to a solution of ten parts of common salt in ninety parts of water, when another mark is made. The distance between these marks is made ten degrees of the scale, which are divided with the compasses, and marked on the slip of paper, as in the other case; the floating point in the solution of salt being made the zero, and the degrees carried upwards from this point.

The temperature at which these instruments were originally adjusted by Baumé, was 10° Reaumur, or 12.5° Centigrade; but those made in England are usually adjusted at 60° Fahrenheit. It is sometimes important to be aware of this difference.

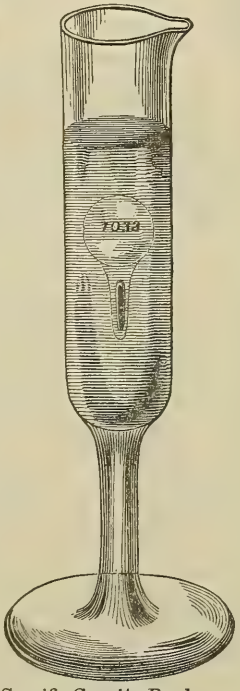
Cartier's hydrometer is much used in France. It is only applicable for liquids lighter than water. This instrument is a modification of Baumé's spirit hydrometer, the form of the instrument being the same, and the same point being taken as the zero of the scale; but the space which, in Baumé's scale, is divided into 32°, is in Cartier's divided into 30°.

It is becoming the common practice in this country to have the scales of hydrometers marked with the specific gravities intended to be indicated, and this is by far the most convenient kind of hydrometer for general use.

Twaddle's hydrometers are much used in Scotland, and occasionally in England. They are made of glass like the common hydrometers, and are sold in sets of six. Each degree on the scale is equal to 0.005 of specific gravity, so that the specific gravity of a liquid is found, with these hydrometers, by multiplying the number of degrees indicated, by 5, and adding 1000. Thus, 10° by Twaddle's hydrometer, $\times 5 + 1000 = 1.050$ specific gravity.

Zanetti's hydrometers, which are made at Manchester, are also sold in sets of six. With these the specific gravity is got by adding a cipher to the number of degrees indicated.

Fig. 2.



Specific Gravity Bead.

Fig. 3.

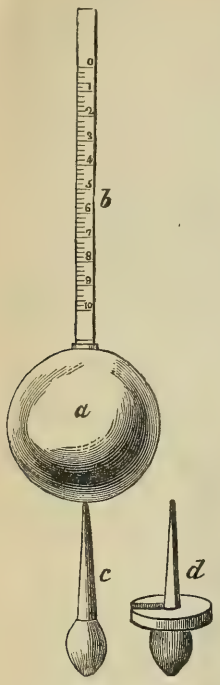
Gay Lussac's Alcoometre.

Specific gravity beads (Fig. 2), sometimes called *Lovi's beads*, are hollow sealed globes of glass, about the size of small pistol bullets. Each bead is a small hydrometer, intended to indicate one fixed density, by its remaining half way between the top and the bottom of the liquid into which it is introduced. These beads are sold in sets, each one being marked with the specific gravity it is to indicate at a certain fixed temperature. They are very useful in making mixtures of any required densities, as, for instance, in making test acids.

Gay Lussac's alcoometre (Fig. 3) is frequently employed in France; it is adapted only for estimating the strength of spirits. The instrument is made like a common glass hydrometer, the scale of which is divided into 100 parts or degrees. The lowest division marked 0, at the bottom of the scale, denotes the specific gravity of pure water at a temperature of 15° Cent.; and the highest division, at the top of the scale, the specific gravity of absolute alcohol at the same temperature. The intermediate degrees indicate the number of volumes of absolute alcohol in 100 volumes of the spirit tried. The instrument is accompanied by a table for correcting the numbers marked on the scale, when it is used at any other temperature than that of 15° Cent.

Sikes's hydrometer is used exclusively in the collection of the spirit revenue. It consists of a spherical ball or float, and an upper and a lower stem made of brass (*a b c*, Fig. 4); the upper stem (*b*) has ten principal divisions, numbered 1, 2, 3, etc., which are each subdivided into five parts; the lower stem (*c*) is made conical, and has a pear-shaped loaded bulb at its lower extremity. There are nine movable weights (*b*, Fig. 5), having the form of

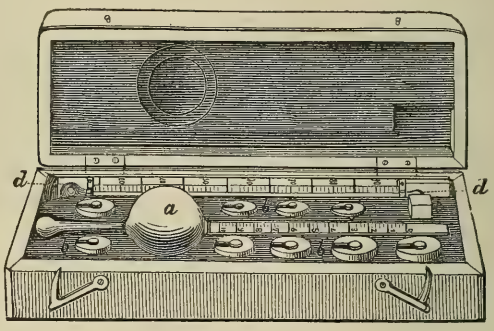
Fig. 4.



Sikes's Hydrometer.

circular disks, and numbered 10, 20, 30, and so on to 90. Each of the circular weights is cut into its centre, so that it can be placed on the inferior conical stem

Fig. 5.



Sikes's Hydrometer.

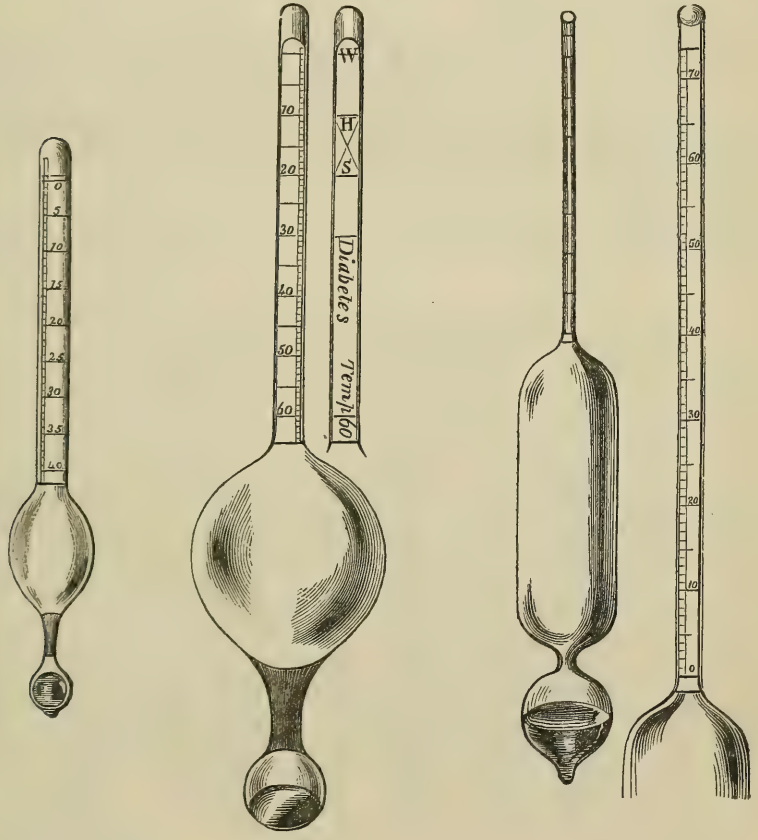
and slid down to the bulb; but, in consequence of the enlargement of the cone, they cannot slip off at the bottom, but must be drawn up to the thin part for this purpose. The instrument is adjusted to strong spirit, specific gravity .825, at 60° F., this being reckoned as standard alcohol. In this spirit the instrument floats at the first division, 0, or zero, without a weight. In weaker spirit, having a greater density, the hydrometer will not sink so low; and, if the density be much greater, it will be necessary to add one of the weights to cause the entire immersion of the bulb of the instrument. Each weight represents as many principal divisions of the stem as its number indicates: thus, the heaviest weight, marked 90, is equivalent to 90 divisions of the stem, and the instrument with this weight added floats at 0 in distilled water. As each principal division on the stem is divided into five, the instrument has a range of 500 degrees between *standard alcohol*, specific gravity .825, and water. In using this instrument, it is immersed in the spirit, and pressed down by the hand to 0, till the whole divided part of the stem be wet. The force of the hand required to sink it will be a guide in selecting the proper weight. Having taken one of the circular weights, which is necessary for this purpose, it is slipped on the conical stem. The instrument is again immersed, and pressed down as before to 0, and is then allowed to rise and settle at any point of the scale. The eye is then brought to the level of the surface of the spirit, and the part of the stem cut by the surface, *as seen from below*, is marked. The number thus indicated by the stem is added to the number of the weight employed, and with this sum at the side, and the temperature of the spirits at the top, the strength *per cent.* is found in a table which accompanies the hydrometer. The strength is expressed in numbers denoting the excess or deficiency *per cent.* of proof spirit in any sample; and the number itself, having its decimal point removed two places to the left, becomes a factor, whereby the gauged contents of a cask or vessel of such spirit being multiplied, and the product being added to the gauged contents if over proof, or deducted from it if under proof, the result will be the actual quantity of proof spirit contained in such cask or vessel.

Dicas's hydrometer is similar in construction to Sikes's; and it is used in

a similar manner, with the same result, indicating the relation of the spirit tried to standard proof spirit.

It is the practice in commerce to designate the strength of spirit as so many degrees above or below proof, the government having fixed upon what is called *proof spirit* as the standard, in comparison with which, the strength of all spirit shall be estimated. The term *proof* is said to have been derived from the ancient practice of trying the strength of spirit by pouring it over gunpowder in a cup, and then setting fire to the spirit; if, when the spirit had burned away, the gunpowder exploded, the spirit was said to be *over proof;* if, on the other hand, the gunpowder failed to ignite, in consequence of the water left from the spirit, it was said to be *under proof.* The weakest spirit capable of firing gunpowder in this way was called *proof spirit;* but it requires a spirit nearly of the strength of what is now called rectified spirit to stand this test. The *standard proof spirit* of the Excise is defined by law (56 Geo. III. cap. 140) to be "*that which, at a temperature*

Fig. 6. Fig. 7. Fig. 8. Fig. 9. Fig. 10.



Saccharometer. Urinometer. Elaëometer.

of 51° *by Fahrenheit's thermometer, weighs exactly twelve-thirteenth parts of an equal measure of distilled water.*" This will have a specific gravity of .923 at 51° Fahr., or about .920 at 60° Fahr. The *standard alcohol* of the Excise is spirit, the specific gravity of which is .825 at 60° Fahr. By

"spirit 60 degrees over proof," is understood a spirit, 100 measures of which, added to 60 measures of water, will form *standard proof spirit*, sp. gr. 920. By "spirit 10 degrees under proof," is understood a spirit, 100 measures of which, mixed with 10 measures of standard alcohol, sp. gr. .825, will form *standard proof spirit.*

Saccharometers (Fig. 6), which are hydrometers intended for determining the density of syrups, are usually made and graduated in the same manner as Baumé's acidometers, and differ only from these in being made smaller; but the scale is sometimes graduated to indicate the proportion of sugar in the solution.

The *urinometer* is a small hydrometer, originally suggested by Dr. Prout, for estimating the density of urine. The scale (Fig. 7) is divided into 60 degrees, the zero being the point at which it floats in distilled water. The numbers on the scale, added to 1000, the assumed sp. gr. of water, give the specific gravities at the respective points; thus, supposing the number cut by the surface of the liquid to be 30, this indicates a sp. gr. 1030. The letters H. S., on the back of the scale (Fig. 8), signify *healthy standard*, which ranges from 10° to 20° of the scale.

The *elaëometer* (Figs. 9, 10) is a very delicate glass hydrometer, intended for testing the purity of olive oil or oil of almonds, by determining their densities. The 0 or zero of the scale is the point at which the instrument floats in *oil of poppy seeds.* The point at which it floats in *pure olive oil* is made the 50th degree, and the space between these two points is divided into 50 equal parts, and numbered accordingly. It floats at 38 or 38½° in *pure oil of almonds.*

The following tables have been drawn up for the purpose of showing the relations between the indications afforded by some of the foregoing instruments:—

Relation between Specific Gravities, and Degrees of Baumé's Hydrometer for Liquids heavier than Water.

Sp. gr.	Baumé.	Sp. gr.	Baumé.	Sp. gr.	Baumé.	Sp. gr.	Baumé.	Sp. gr.	Baumé.
1.000	0	1.116	15	1.264	30	1.454	45	1.714	60
1.007	1	1.125	16	1.275	31	1.470	46	1.736	61
1.014	2	1.134	17	1.286	32	1.485	47	1.758	62
1.022	3	1.143	18	1.298	33	1.501	48	1.779	63
1.029	4	1.152	19	1.309	34	1.526	49	1.801	64
1.036	5	1.161	20	1.321	35	1.532	50	1.823	65
1.044	6	1.171	21	1.334	36	1.549	51	1.847	66
1.052	7	1.180	22	1.346	37	1.566	52	1.872	67
1.060	8	1.190	23	1.359	38	1.583	53	1.897	68
1.067	9	1.199	24	1.372	39	1.601	54	1.921	69
1.075	10	1.210	25	1.384	40	1.618	55	1.946	70
1.083	11	1.221	26	1.398	41	1.637	56	1.974	71
1.091	12	1.231	27	1.412	42	1.656	57	2.002	72
1.100	13	1.242	28	1.426	43	1.676	58	2.031	73
1.108	14	1.252	29	1.440	44	1.695	59	2.059	74
								2.087	75

Relation between Specific Gravities, and Degrees of Baumé's Hydrometer for Liquids lighter than Water.

Sp. gr.	Baumé.	Sp. gr.	Baumé.	Sp. gr.	Baumé.	Sp. gr.	Baumé.	Sp. gr.	Baumé.
1.000	10	0.934	20	0.875	30	0.823	40	0.777	50
0.993	11	0.927	21	0.869	31	0.819	41	0.773	51
0.986	12	0.921	22	0.864	32	0.814	42	0.769	52
0.979	13	0.915	23	0.859	33	0.809	43	0.765	53
0.972	14	0.909	24	0.853	34	0.805	44	0.760	54
0.966	15	0.903	25	0.848	35	0.800	45	0.756	55
0.959	16	0.897	26	0.843	36	0.796	46	0.752	56
0.953	17	0.892	27	0.838	37	0.791	47	0.748	57
0.946	18	0.886	28	0.833	38	0.787	48	0.744	58
0.940	19	0.880	29	0.828	39	0.782	49	0.739	59
								0.735	60

TEMPERATURES TO BE OBSERVED IN CERTAIN PHARMACEUTICAL OPERATIONS.

In the fermentation of saccharine solutions, the highest temperature should not exceed 86° (Thomson).

The lowest temperature at which they will ferment is 38° (Thomson).

The process of acetous fermentation is best conducted at a temperature of about 86°.

The temperature requisite to coagulate albumen varies with the state of dilution. If the quantity of albumen be so great that the liquid has a slimy aspect, a heat of 145° or 150° suffices, but in a very dilute condition boiling is required (Fownes).

In the British and U. S. Pharmacopœias—

When a boiling heat is directed, a temperature is meant of 212° Fahr.

When a gentle heat is directed, a temperature is meant of from 90° to 100°.

All the specific gravities of substances are to be taken at a temperature of 60°.

A water bath is that by which any substance contained in a proper vessel is exposed either to hot water, or the vapor of boiling water, so that the substance may thus be subjected to a heat near to, but necessarily below 212.°

In the steam-bath the vapor of water at a temperature above 212°, but not exceeding 230°, is similarly applied.

A sand-bath is made of sand, to be gradually heated, in which anything is placed contained in a proper vessel.

Vegetables, shortly after they have been gathered, those excepted which ought to be fresh, are to be lightly strewed, and dried as quickly as possible with a gentle heat (90° to 100°). They are to be kept afterwards in proper vessels, excluded from the access of light and moisture.

HYDROMETRICAL EQUIVALENTS.

Sp. gr. at 60° Fah.	100 parts contain of Alcohol sp. gr. 796. By weight.	Water.	1000 parts contain of standard Alc. sp. gr. 825.	Sikes.	Baumé.	Cartier.	Per cent. of Alcohol, sp. gr. 796 by volume. GayLussac.
796	100	0			46.5	43.48	100
797	99.5	.5					99.75
798	99	1			46	43.06	99.50
799	98.67	1.33					99.25
800	98.33	1.67					99
801	98	2					98.75
802	97.67	2.33			45	42.14	98.50
803	97.33	2.67				42	98.28
804	97	3					98.15
805	96.67	3.33					98
806	96.33	3.67					97.80
806.5	96.17	3.83			44	41.22	97.70
807	96	4					97.60
808	95.5	4.5				41	97.40
809	95	5					97.29
809.5	94.89	5.10					97.10
810	94.67	5.33					97
811	94 33	5.67			43	40.34	96.75
812	94	6					96.50
813	93.67	6.33				40	96.25
814	93.33	6.67					96
815	93	7					95.75
816	92.5	7.5			42	39.40	95.50
817	92	8					95.25
818	91.67	8.33					95
818.6	91.5	8.5				39	94.90
819	91.33	8.67					94.75
820	91	9					94.50
821	91.5	9.5			41	38.46	94.25
822	90	10					94
823	89.67	10.33				38	93.75
824	89.33	10.67					93.50
825	89	11	1000	63 O. P.	40	37.55	93.25
826	88.5	11.5	993	62			93
827	88	12	988.5	61.5		37	92.6
828	87.67	12.33	984	61	39.5		92.3
829	87.33	12.67	979.5	60.5	39	36.63	91
830	87	13	975	60			91.7
831	86.5	13.5	970.5	59.5	38.5	36.17	91.35
832	86	14	966	59		36	91
833	85.67	14.33	961.5	58.3			90.65
834	85.33	14.67	957	58	38	35.72	90.3
835	85	15	953	57.5			90
836	84.67	15.33	949	57	37.5	35.26	89.7
837	84.33	15.67	944.5	56.5			89.35
837.6	84.25	15.75	942.5	56.3		35	89.20
838	84	16	940	56			89
839	83.5	16.5	936	55.5	37	34.80	88.75
840	83	17	932	55			88.5

Sp. gr. at 60° Fah.	100 parts contain of Alcohol sp. gr. 796. By weight.	Water.	1000 parts contain of standard Alc. sp. gr. 825.	Sikes.	Baumé.	Cartier.	Per cent. of Alcohol, sp. gr. 796 by volume. Gay Lussac.
841	82.67	17.33	928	54.5 O. P.	36.5		88.25
842	82.33	17.67	924	54		34.94	88
843	82	18	920	53.5		34	87.65
844	81.67	18.33	916	53	36	33.88	87.3
845	81.33	18.67	912	52.5			87
846	81	19	908	52			86.7
847	80.5	19.5	903	51	35.5	33.42	86.35
848	80	20	898	50			86
849	79.67	20.33	893	49.5			85.65
850	79.33	20.67	888	49	35	33	85.3
851	79	21	883	48.5			85
852	78.5	21.5	878	48	34.5	32.43	84.7
853	78	22	873	47.5			84.35
854	77.5	22.5	868	47			84
855	77	23	862.5	46.5	34	32.04	83.65
856	76.5	23.5	857	46			83.3
857	76	24	853	45.5	33.5	31.58	83
858	75.67	24.33	849	45.25			82.7
859	75.33	24.67	844.5	45			82.35
860	75	25	840	44.75	33	31.13	82
861	74.67	25.33	836.5	44.5		31	81.7
862	74.33	25.67	833	44			81.3
862.5	74.16	25.84	830.5	43.75	32.5	30.76	80
863	74	26	828	43.5			80.8
864	73.5	26.5	823	43			80.3
865	73	27	818	42.5	32	30.21	79.95
866	72.5	27.5	813	42			79.6
867	72	28	810	41			79.3
867.5	71.83	28.17	808.5	40.5	31.5	29.78	79.15
868	71.67	28.33	807	40			79
869	71.33	28.67	802.5	39.5			78.65
870	71	29	798	39	31	29.29	78.3
871	70.5	29.5	792.5	38.5			78
872	70	30	787	38		29	77.7
873	69.5	30.5	781.5	37	30.5	28.83	77.35
874	69	31	776	36			77
875	68.67	31.33	772	35			76.5
876	68.33	31.67	768	34	30	28.38	76
877	68	32	762.5	33			75.65
877.5	67.75	32.25	759.25	32.5		28	75.5
878	67.5	32.5	757	32			75.3
878.5	67.25	32.75	753.75	31.5	29.5	27.91	75
879	67	33	751.5	31			74.8
880	66.5	33.5	746	30			74.3
881	66	34	742	29.5	29	27.44	74
882	65.5	34.5	738	29			73.7
883	65	35	733.5	28.5		27	73.35
883.5	64.83	35.17	731.25	28.25	28.5	26.99	73.17
884	64.67	35.33	729	28			73
885	64.33	35.67	724	27.5			72.5
886	64	36	719	27	28	26.53	72

Sp. gr. at 60° Fah.	100 parts contain of Alcohol sp. gr. 796 By weight.	Water.	1000 parts contain of standard Alc. sp. gr. 825.	Sikes.	Baumé.	Cartier.	Per cent. of Alcohol, sp. gr. 796 by volume. GayLussac.
887	63.67	36.33	714	26 O. P.			71.5
888	63.33	36.67	709	25			71
889	63	37	704	24.5	27.5	26.07	70.65
890	62.5	37.5	699	24			70.3
891	62	38	694	23			69.8
892	61.5	38.5	689	22	27	25.61	69.3
893	61	39	684.5	21			69
894	60.67	39.33	680	20			68.7
895	60.33	39.67	675.5	19.5			68.35
895.5	60.16	39.84	673.25	19.25	26.5	25.15	68.17
896	60	40	671	19		25	68
897	59.5	40.5	666.5	18			67.65
898	59	41	662	17	26	24.69	67.3
899	58.5	41.5	655.5	16			67
900	58	42	649	15			66.7
900.5	57.75	42.25	647	14.75	25.5	24.23	66.52
901	57.5	42.5	645	14.5			66.35
901.5	57.25	42.75	643	14.25		24	66.17
902	57	43	641	14			66
903	56.5	43.5	636	13	25	23.77	65.5
904	56	44	631	12			65
905	55.5	44.5	626	11.5			64.5
906	55	45	621	11	24.5	23.31	64
907	54.5	45.5	616.5	10.5			63.65
908	54	46	612	10		23	63.3
909	53.5	46.5	607	9	24	22.85	62.65
910	53	47	602	8			62.3
911	52.5	47.5	595.5	7.5			61.9
912	52	48	591	7	23.5	22.39	61.5
913	51.67	48.33	586	6			61
914	51.33	48.67	581	5			60.5
915	51	49	576	4	23	21.94	60
916	50.5	49.5	571	3			59.6
917	50	50	560.5	2			59.3
918	49.67	50.33	562	1	22.5	21.48	59
919	49.33	50.67	554	.5			58.5
920	49	51	550	Proof			58
921	48.5	51.5	545	1 U. P.	22	21.02	57.5
922	48	52	540	2			57
923	47.5	52.5	535.5	3	21.5	20.56	56.5
924	47	53	531	4			56
925	46.5	53.5	526	5			55.5
926	46	54	521	6	21	20.10	55
927	45.5	54.5	515.5	6.5			54.5
928	45	55	510	7			54
929	44.5	55.5	505	8			53.5
929.5	44.25	55.75	502.5	8.5	20.5	19.64	53.25
930	44	56	500	9			53
931	43.67	56.33	495.5	10			52.5
932	43.33	56.67	489	11			52
933	43	57	484	12	20	19.18	51.5

Sp. gr. at 60° Fah.	100 parts contain of Alcohol sp gr. 796. By weight.	Water.	1000 parts contain of standard Alc. sp. gr. 825.	Sikes.	Baumé.	Cartier.	Per cent. of Alcohol, sp. gr. 796 by volume. GayLussac.
934	42.5	57.5	479	13 O. P.		19	51
935	42	58	472.5	14			50.5
936	41.5	58.5	468	15	19.5	18.72	50
937	41	59	462	16			49.5
938	40.5	59.5	456	17			49
939	40	60	450	18	19	18.26	48.5
940	39.5	60.5	444	19			48
940.5	39.25	60.75	441	19.5		18	47.63
941	39	61	438	20			47.25
942	38.5	61.5	432	21	18.5	17.80	46.5
943	38	62	426.5	22			46
944	37.5	62.5	421	23			45.5
945	37	63	416	23.5	18	17.35	44.75
946	36.5	63.5	411	24			44
947	36	64	399	25		17	43.5
948	35.5	64.5	397	26	17.5	16.89	43
949	35	65	389.5	27			42.25
950	34.5	65.5	382	28			41.5
951	34	66	376	29.5	17	16.43	40
952	33.5	66.5	370	31			40.5
953	33	67	364	32.5			39.75
954	32.5	67.5	358	34			39
955	32	68	352	35	16.5	16.3	38.5
956	31.5	68.5	346	36		16	38
957	31	69	339.5	37.5			37.25
958	30	70	333	39			36.5
959	29.5	70.5	324	40.5	16	15.51	35.75
960	29	71	315	42			35
961	28.5	71.5	307.5	43.5			34.5
962	28	72	300	45	15.5	15	34
963	27	73	292.5	46.5			33
964	26.5	73.5	285	48			32
965	26	74	277.5	49.5	15	14.59	31
966	25.5	74.5	270	51			30
967	25	75	261.5	52.5			29
968	24	76	253	54			28
968.5	23.75	76.25			14.5	14.13	27.5
969	23.5	76.5	244.5	55.5			27
970	23	77	236	57			26
971	22.5	77.5	227	58.5			25
972	22	78	218	60	14	13.67	24
973	21	79	209	62			23
974	20	80	200	64			22
975	19	81	195	66	13.5	13.21	21
976	18.5	81.5	190.5	68			20
977	18	82	183.5	70			19
978	17	83	175	72	13	12.76	18
979	16	84	163	73.5			17
980	15.5	84.5	150	75			16
981	15	85	143	76			15
982	14	86	135	77	12.5	12.30	14

Sp. gr. at 60° Fah.	100 parts contain of Alcohol sp. gr. 796. By weight.	Water.	1000 parts contain of standard Alc. sp. gr. 825.	Sikes.	Baumé.	Cartier.	Per cent. of Alcohol, sp. gr. 796 by volume. GayLussac.
983	13.5	86.5	128	78.5 O.P.			13
984	13	87	120	80			12
985	12.5	87.5	112	81			11.25
986	12	88	105	82	12	11.84	10.5
987	11	89	98	83.5			9.75
988	10	90	90	85			9
989	9	91	82	87	11.5	11.38	8
990	8	92	75	89			7
991	7	93	67.5	90.5			6.5
892	6	94	60	92			6
993	5.5	94.5	52.5	93.5	11	10.92	5
984	5	95	45	95			4
995	4	96	37.5	95.5			3.5
996	3.5	96.5	30	96	10.5	10.46	3
997	3	97	22.5	97			2
998	2	98	15	98			1
999	1	99	7.5	99			.5
1000	0	100	0	100	10	10	0

SPECIFIC GRAVITIES OF SOME OF THE LIQUID PREPARATIONS ORDERED IN THE PHARMACOPŒIAS.

The German Pharmacopœia directs the Specific Gravity to be taken at a temperature of 15° C. The Paris Codex at 18° C. The British and U. S. Pharmacopœias at 60° Fahr.

		Sp. Gr.
Acetum	Brit.	1.017 to 1.019
Acidum Aceticum	Brit.	1.044
———	U. S.	1.047
——— Glaciale	Brit.	1.065 to 1.066
——— Concentratum	Fr.	1.075 to 1.083
——— Dilutum	Brit., U. S.	1.006
———	Germ.	1.040
——— Hydrochloricum	Brit., U. S.	1.160
———	Fr.	1.18
——— Purum	Germ.	1.124
———	Dublin	1.176
——— Dilutum	Germ.	1.060
———	Brit.	1.052
———	U. S.	1.038
——— Hydrocyanicum	Brit.	0.997
——— Nitricum	Fr., Brit., U.S.	1.420
——— Purum	Germ.	1.185
——— Dilutum	Germ.	1.089
———	U. S.	1.068
———	Brit.	1.101
———	Dublin	1.092
——— Phosphoricum	Germ.	1.120
——— Dilutum	U. S.	1.056
———	Fr., Brit.	1.08
——— Sulphuricum	Fr., Brit., U.S.	1.843
———	Germ.	1.840

		Sp. Gr.
Acidum Sulphuricum Dilutum	Germ.	1.113 to 1.117
———	Brit.	1.094
———	U. S.	1.082
Æther	U. S.	0.750
———	Fr.	0.720 to 0.725
———	Germ.	0.728
——— Fortior (Purus)	U. S., Brit.	0.720
——— Nitrosus	Fr.	0.947
Alcohol[1] (rectificatus)	Brit.	0.838
———	U. S.	0.835
———	Germ.	0.832
——— Fortius	U. S.	0.817
——— Dilutum	U. S.	0.941
——— (tenuior)	Brit.	0.920
———	Germ.	0.892
Aqua Destillata	U.S., Fr., Brit.	1.000
——— Ammoniæ	U. S., Germ.	0.960
———	Fr.	0.92
——— (liquor)	Brit.	0.959
——— Fortior	U. S.	0.900
——— (liquor)	Brit.	0.891
Chloroformum	Germ.	1.492 to 1.496
———	Brit.	1.49
———	U. S., Fr.	1.480
Glycerina	U. S.	1.25
Glycerinum	Brit.	1.25
———	Fr.	1.24 to 1.26
———	Germ.	1.23 to 1.25
Liquor Ammonii Acetici	Germ.	1.028 to 1.032
———	Fr.	1.02
——— Carbonici	Germ.	1.070 to 1.074
——— Antimonii Chloridi	Brit.	1.47
——— (Stibiichlorati)	Germ.	1.340 to 1.360
——— Bismuthi et Ammoniæ Citratis	Brit.	1.122
——— Ferri Acetici	Germ.	1.134 to 1.138
——— Chloridi	U. S.	1.355
——— Perchloridi	Fr.	1.262
——— Fortior	Brit.	1.338
——— Sesquichlorati	Germ.	1.480 to 1.484
——— Nitratis	U. S.	1.060 to 1.070
——— Pernitratis	Brit.	1.107
——— Subsulphatis	U. S.	1.552
——— Persulphatis	Brit.	1.441
——— Sulphurici Oxydati	Germ.	1.317 to 1.319
——— Tersulphatis	U. S.	1.320
——— Hydrargyri Nitratis	Brit.	2.246
———	U. S.	2.165
——— Plumbi Subacetatis	U. S.	1.267
———	Brit.	1.26
———	Fr.	1.32
——— Subacetici	Germ.	1.235 to 1.240

[1] The French Codex indicates the density of alcohol by giving in the various formulæ its specific gravity direct, or in degrees of Cartier's hydrometer, or in degrees of Gay-Lussac's alcoometer.

		Sp. Gr.
Liquor Potassæ	U. S.	1.065
———	Brit.	1.058
———	Fr.	1.332
——— Kali Caustici	Germ.	1.330 to 1.334
Liquor Sodæ	U. S.	1.071
———	Brit.	1.047
———	Fr.	1.33
——— Natri Caustici	Germ.	1.334
Spiritus Ætherеus	Germ.	0.812
——— Ætheris	Brit.	0.809
——— Compositus	U. S.	0.815
——— Nitrosi	Brit.	0.845
———	Germ.	0.840 to 0.850
———	U. S.	0.837
(Spiritus rectificatus and tenuior, *see* Alcohol.)		
Syrupus	U. S.	1.317
———	Brit.	1.330
——— (boiling)	Fr.	1.26
Tinctura Ferri Perchloridi	Brit.	0.992
——— Iodi Decolorata	Germ.	0.940 to 0.945

RELATION BETWEEN DIFFERENT THERMOMETRICAL SCALES.

The thermometer always used in this country and England is that of Fahrenheit.

In this instrument, the range between the freezing and boiling points of water is divided into 180°, and as the greatest possible degree of cold was supposed to be that produced by mixing snow and salt together, it was made the zero. Hence, the freezing point became 32°, and the boiling point 212°.

The Centigrade thermometer places the zero at the freezing point of water, and divides the range between the freezing and boiling points into 100°. This scale has long been used in Sweden, under the title of Celsius's thermometer, and has been adopted by all the European pharmacopœias, except the British.

Reaumur's thermometer, which was formerly used in France, divides the space between the freezing and boiling points of water into 80°, and places the zero at the freezing point. It is now little employed, except in parts of Germany.

De Lisle's thermometer is used in Russia. The graduation begins at the boiling point, and increases towards the freezing point. The boiling point is marked 0°, and the freezing point 150°.

To reduce Centigrade degrees to those of Fahrenheit.

Rule.—Multiply by 9, divide the product by 5, and add 32.

Thus, $40^{\text{Cent.}} \times 9 \div 5 + 32 = 104^{\text{Fahr.}}$.

To reduce Fahrenheit's degrees to those of Centigrade.

Rule.—Subtract 32, multiply by 5, and divide by 9.

Thus, $104^{\text{Fahr.}} - 32 \times 5 \div 9 = 40^{\text{Cent.}}$.

To reduce Reaumur's degrees to those of Fahrenheit.

Rule.—Multiply by 9, divide by 4, and add 32.

Thus, $32^{\text{Reaumur.}} \times 9 \div 4 + 32 = 104^{\text{Fahr.}}$.

To reduce Fahrenheit's degrees to those of Reaumur.

RULE.—Subtract 32, multiply by 4, and divide by 9.

Fahr. Reaum.
Thus, $104 - 32 \times 4 \div 9 = 32$.

To reduce Reaumur's degrees to those of Centigrade.

RULE.—Multiply by 5, and divide by 4.

Reaum. Cent.
Thus, $32 \times 5 \div 4 = 40$.

To reduce Centigrade degrees to Reaumur.

RULE.—Multiply by 4, and divide by 5.

Cent. Reaum.
Thus, $40 \times 4 \div 5 = 32$.

EXPLANATION OF THE PRINCIPAL ABBREVIATIONS OCCURRING IN PHARMACEUTICAL FORMULÆ.

℞. Recipe—Take.
F. S. A. Fiat secundem artem—Let it be made or prepared according to the rules of the art.
M. Misce—Mix.
M. S. D. Misce, signa, da—Mix the medicine, and deliver it afterwards, with the requisite instruction, to the patient (or nurse) in writing.
M. F. P. Misce fiat pulvis—Mix to form a powder.
M. F. Mist. Misce fiat mistura—Mix to form a liquid mixture.
M. F. Pil. Misce fiant pilulæ—Mix to form pills.
Div. Divide—Divide.
Sol. Solve—Dissolve.
Fasc. j. Fasciculus[1]—An armful.
Man. j. Manipulus—A handful, a gripe.
Pugil. j. Pugillus or Pugillum—A pinch.
Cyat. j. Cyathus—A glassful.
Cochl. j. Cochlear or Cochleare—A spoonful.
Gutt. Gutta—A drop.
No. 1, 2, 3, etc.—The number of pieces or parts.
Ana, or āā.—Of each.
P. Ae. Partes æquales—Equal parts.
Q. S. Quantum sufficit—As much as will suffice.
Q. L. Quantum libet—As much as you like.
Q. V. Quantum volueris—As much as you like.
℔. Libra—A pound.
℥. Uncia—An ounce.
ʒ. Drachma—A drachm or dram.
℈. Scrupulus—A scruple.
Gr. Granum—A grain.
Pil. Pilula—A pill.
Pot. Potio—A potion.
Pulv. Pulvis—A powder.
Tinct. Tinctura—A tincture.

[1] The terms *fasciculus*, *manipulus*, and *pugillus* are understood differently by authors, as seen in the following table :—

	Linnæus.	Geiger.	Paris.
Pugillus	ʒj	ʒss ad ʒj	℥j ad ʒij.
Manipulus	ʒiv	ʒiv	℥j ad ℥ijss.
Fasciculus	℥vj	℥j.	

Ext. Extractum—An extract.
Chart. Chartula—A small paper.
Collyr. Collyrium—An eye water.
Collutor. Collutorium—A mouth-wash.
Cong. Congius—A gallon.
O. Octarius—A pint.
f℥. Fluiduncia—A fluidounce.
fℨ. Fluidrachma—A fluidrachm.
♏. Minimum—A minim.
Decoct. Decoctio—A decoction.
Garg. Gargarisma—A gargle.
Haust. Haustus—A draught.
Infus. Infusum—An infusion.
Mass. Massa—A mass.
Mist. Mistura—A mixture.
Ss. Semis—A half.

The Latin language is used in many parts of Europe for prescriptions and for the accompanying directions, except in France, where, although the prescription itself may be in Latin, the directions are usually given in French, and in Germany, where the prescription is written in Latin, but the directions in German; this is also the case in the United States, where few, if any, physicians give the directions for the use and mode of administration of a formula in any other language than English. As, however, it often becomes of importance to refer to the prescriptions of foreign practitioners, the following table, from Mowbray's *Conspectus*, is introduced:—

A VOCABULARY

Of the Words most frequently occurring in the Prescriptions of Physicians.

A.

A, or āā, or ana, of each ingredient; more promptly expressed by the genitive case plural (singulorum) of each; for instance:
℞.—Aquæ cinnamomi, tinct. rhei, āā fℨij, means
Take of cinnamon-water, and the tincture of rhubarb, of each two fluidrachms.

Abdomen, the belly. Gen.—inis, of the belly. Dat.—ini, to the belly.
Absente febre, while the fever is off.
Accuratè (adverb), accurately. Accuratè pensi, weighed with the utmost exactness. Accuratè misceantur, mix very completely.
Aciditas, sharpness. Ad gratam aciditatem, make it just acid enough to be palatable, and not too sour.
Acmè, the height of a fever or any other disease.
Ad, to. Ad duas vices, at twice taking. Ad libitum, freely, as you like.
Adde, add. Addantur, let there be added. Addendus, to be added. Addendo, adding.
Admoveatur, let there be applied—antur, plural, when more than one is to be applied.
Adstante febre, while the fever is on.
Æger, a sick person, a patient. Ægra, a female patient.
Aggrediente febre, when the fever is coming on.
Aggressus, an attack. Aggressus febris, the attack of a fever.
Agitato vasè, shake the phial.
Albus, white.
Aliquot, some. Aliquotes, sometimes.
Alter, altera, alterum, the other.

Alternus, alternate. Alternis horis, every second hour. Alternis diebus, every alternate day.
Aluta, leather. Extende super alutam mollem, spread on soft leather.
Alvus, the belly, the bowels. Adstrictâ alvo, when costive.
Amplus, large. Cochleare amplum, a tablespoonful.
Antè, before. Ut antè, as before.
Antemeridianus, in the forenoon; any time before twelve o'clock at noon.
Apparatus, any sort of preparation, instruments, or in short, everything that is requisite to be had in readiness for performing any sort of operation. Also, the more delicate term for a bladder and pipe for clysters.
Aperiens, opening, gentle purging.
Applicetur, let there be applied.
Aqua, water. Aquæ, of water. Aqua bulliens, boiling water. Aqua fervens, hot water.
Armatus, armed. Fistula armata, an apparatus for clysters; a pipe and bladder.
Auris, the ear. Auri, to the ear. Aures, ears. Auribus, to the ears.
Aut, or.

B.

Benè, well.
Bibat, let him drink.
Biduum, two days. Omni biduò vel triduo, every two or three days.
Bihorium, the space of two hours. Omni bihorio, every two hours.
Bis, twice; bis, terve, twice or thrice.
Bullio, to boil; bulliens, boiling. Aquæ bullientis, of boiling water.
Bulliant, let them boil.

C.

Calefactus, made warm.
Capiat, let (the patient) take. Capt. cochl. iij. magn., three tablespoonfuls to be taken.
Catharticus, purging.
Cautè, cautiously.
Cerevisia, beer. Cerevisia Londinensis, porter. Cerevisiæ Fermentum, yeast.
Charta, paper. Charta cærulea, blue paper. Chartula, a little piece of paper. Cola trans chartam, filter through paper.
Cibus, food.
Circa, about. Circiter, about.
Citò, soon, quickly. Citissimè (the superlative degree), as quick as possible.
Clausus, clausa, clausum, covered. Vase clauso, in a covered vessel.
Cochleare, a spoonful. Cochlearia, spoonfuls. Coch. magnum, amplum, a tablespoonful. Co. infantulorum, coch. modicum, child's spoonful, a dessertspoonful. Co. parvum, a teaspoonful.
Coctio, a boiling. Sub finem coctionis, towards the end of the boiling, when almost boiled.
Cæruleus, blue. Charta cærul., blue paper. Unguentum cæruleum, mercurial ointment.
Cola (imperat. of Colo), strain, to filter.
Colatus, strained, filtered. Colato liquori, to the strained liquor.
Colatura, a straining. Colaturæ, to the strained liquor.
Colatus, let it be strained. Colentur, let them be strained.
Collum, a neck.
Comp., Compositus, compound.
Continuo, to continue. Continuantur remedia, go on with the same medicines as last prescribed.
Contundo, to bruise. Contusus, bruised.

Contusio, a bruise, a contusion.
Coquo, to boil. Coque, boil. Coque parùm, boil a little while.
Coquantur, let them be boiled.
Cor, the heart. Scrobiculus cordis, the pit of the stomach.
Coxa, coxendix, the hip.
Cras, to-morrow; c. m., cras mane, early to-morrow morning; c. m. s., cras mane sumendus, to be taken early to-morrow morning.
Crastinus (adj.), of to-morrow. In usum crastinum, for to-morrow's use.
Cribrum, a sieve. Trans cribrum, through a sieve.
Cujus, of which. Cujus capiat, or sumat, of which (the patient is to) take.
Cum, with.
Cyathus, a cup. Cyathus vinarius, a wineglass. Cyath. theat, a teacupful.

D.

Da, give. Detur, dentur (plural), let be given.
De, of. De quo, or quâ, of which. De die, in a day.
Deauratus, gilt. Deaurentur pilulæ, let the pills be gilt.
Debilitas, weakness.
Decem, ten. Decimus, the tenth.
Debitus, due. Ad debitam spissitudinem, to a proper degree of thickness, as to consistence.
Decubitus, lying down. Horâ decubitûs, at bedtime.
Deglutio, to swallow. Deglutiatur, is swallowed—etur, let be swallowed.
Dein, deinde, then; afterwards.
Dejectio, a depositing, or putting down; also a going to stool; as, post duas dejectiones alvi, after two motions.
Dejitio, to deposit. Donec alvus bis dejiciat, until the patient shall have had two stools.
Dexter, the right. Manus dextra, the right hand. Auri dextro, to the right ear.
Dictus, spoken of, said.
Dies, a day. Die, in a day; as, bis die, twice a day. Diebus, in days; as, tertiis diebus, every third day. Alternis diebus, every alternate day.
Dilutum, diluted.
Dimidium, the half. Dimidius, a, um (adjective), half.
D. P., Directione propriâ, with its proper direction.
Diu, a long time. Tere diu, rub for a long time.
Diuturnus, long continued. Diuturnâ triturationc, by long-continued rubbing, or grinding in the mortar. Diuturna coctione, by long boiling.
Dolor, pain. Dolores, pains. Doloris, of the pain.
Dolens, pained. Parti dolenti, to the pained part.
Donec, until. Dum, whilst.
Durante dolore, while the pain continues.

E.

Eadem, eandem, the same. Eodem, in the same.
Effunde, pour out.
Effervescentia, the effervescence.
Effervescet, effervesces.
Ejusdem, of the same, the genitive case of idem.
Enema, a clyster. Enemata, clysters.
Erit, shall be.
Evanesco, evanui, to disappear. Evanuerit, shall have disappeared.
Exhibe, exhibeatur, give. Exhibendus, to be given.
Extendo, to extend, also to spread. Extende super alutam, spread it on leather.
Extensus, a, um, spread.

F.

Fac, make. Fac in pilulas xij, make into twelve pills.
Farina, flour. Farina seminis lini, linseed meal.
Febris, a fever. Febre durante, while the fever is on.
Femur, a thigh.
Femoribus, to the thighs. Femoribus internis, to the inner sides of the thighs.
Fervens, boiling. Fervidus, fervida, hot.
Ferventis, of boiling. ℞. aq. ferventis, take of boiling water.
Finis, the conclusion. Sub finem coctionis, when almost boiled enough.
Fiat, make (the singular number). Fiant, make (plural).
Fontana, fountain. Aqua fontana, spring water.
Formula, prescription.
Fotus, a fomentation.
Fuerit, shall have been; as, donec alvus soluta fuerit, until a motion is (or shall have been) procured.

G.

Gargarisma, a gargle.
Gelatina, jelly. Gelatina ribesiorum, currant jelly. Gelatina quovis, any sort of jelly.
Globulus, a little ball. Globuli Gascoigni, Gascoign's ball. Donec globuli evanuerint, until the globules (of quicksilver) totally disappear (so that they cannot be seen even with a microscope).
Gradatim, by slow degrees.
Gratus, grata, gratum, agreeable, pleasant. Ad gratam aciditatem, so as to make it pleasantly acid without being too sour. In quovis grato vehiculo, in any agreeable vehicle.
Gutta, a drop. Guttæ, drops. Guttas, drops.
Guttatim, drop by drop.

H.

Hac, this. Hac nocte, this night. Hanc, this. Sumat hanc, let him take this.
Hactenus, hitherto, heretofore, up to the present day.
Harum, of these. Harum pilularum sumat tres, of these pills let him or her take three.
Haustus, a draught.
Hebdomada, a week.
Heri, yesterday. Ut heri, as yesterday.
Hesternus, of yesterday. Hesterna nocte, last night.
Hirudo, a leech. Hirudines, leeches.
His, in these, to these. His adde, add to these.
Hora, an hour. Horæ, of an hour. Horæ (plural) hours.
H.S. (horâ somni), at the hour of rest.
H.S.S. (horâ somni sumendus), to be taken at bedtime. Hora decubitus, at the hour of going to rest, bedtime.
Horâ vespertinâ, in the evening.
Horæ unius spatio, in the space of one hour.
Horæ ¼, horæ quadrante, quarter of an hour.
Horis intermediis, at intermediate hours, when two medicines are to be taken. Horis intermediis means that one is to be given exactly at midtime from the other: suppose a draught is ordered (to be taken every six hours), and a powder horis intermediis, that is every six hours intermediately, then a draught will be taken at six o'clock and at twelve, and a powder at three and at nine.
Hujusmodi, of this sort, like these.

H. p. n., Haustus purgans noster, a formula of purging draught made according to a practitioner's own private Pharmacopœia, and is prepared so as to keep a long time without spoiling, and thus avoid the trouble of preparing it every time a draught is wanted. Mitt. H. p. n. ℥ij ad ij Vices c. m. s. Mitte Haustus purgantis nostri uncias duas, ad duas Vices cras mane sumendus; send two ounces of our purging draught, to be taken to-morrow morning, at twice, that is, half at first, and the remaining half in an hour if the first do not operate.

I.

Idoneus, proper, appropriate.
Idem, eadem, the same. Ejusdem, of the same, the genitive case of idem.
Imponatur (sing.), let there be put on—nantur (plural).
Imprimis, first.
In, in. In die, in a day.
Indiès (an adverb) every day, daily.
Indicaverit, shows, indicates.
Infusio, infusum, an infusion.
Infunde, infundatur, infuse.
Inter, between.
Injectio, injection.
Inquietudo, restlessness. Urgente inquietudine, if restless.
Injiciatur, throw in, throw up. Injiciatur enema, let a clyster be administered.
Injiciendus, injiciendum, to be administered.
Instar (an adverb), as big as. Sumat molem instar nucis moschatæ, the bigness of a nutmeg to be taken.
Intermedius, intermediate.
Internus, the inner side.

J.

Jam, already. Jampridem, jamdudum, some time ago, heretofore.
Jugulum, the throat.
Jusculum, broth. Jusculum ovillum, mutton broth. Jus bovinum, beef tea.
Juxta, near to.

L.

Lac, milk. Lactis, of milk. Lacte, in milk.
Lævigatus, levigated.
Lana, flannel. Lana nova, new flannel.
Languor, faintness, lowness. In languoribus, in the fainting fits, when low and faint.
Latus, the side. Lateris, of the side. Lateri, to the side.
Latus dolens, the pained side. Lateri dolenti, to the pained side.
Latus, lata latum (adjective), broad.
Lectus, a bed. In lecto, in bed.
Liber, a book.
Libra, a pound. Libris, libras, pounds.
Linteum, lint; also linen.
Liquesco, to liquefy, to melt. Donec liquiescat, till it melts.
Liquidus, liquid. Sedes liquidæ, loose stools. In quovis liquido, in any liquid.
Londinensis, of London. Pharmacopœia Londinensis, the London Pharmacopœia.
Lumborum, the loins.
Libet (a verb impersonal), it pleases. Ad libitum, just as you please.

M.

Magnus, magna, magnum, large. Magnum cochleare, a tablespoonful.
Major, greater, larger. Cochlearia duo majori, two tablespoonfuls.

Maximus, the greatest. Maximâ curâ, with the greatest care.
Maximè, chiefly.
Malleolus, the ankle. Malleolus internus, the inner ankle.
Manè, in the morning. Manè primo ; valde mane, very early in the morning.
Manus, a hand. Manu calefacta, with a warm hand.
Massa, a mass. Massa pilularis, a mass fit for forming into pills.
Matutinus, in the morning or forenoon.
Mediocris, middle-sized. Pilulæ mediocres, middle-sized pills. Cochleare mediocre, a dessertspoonful, a pap-spoonful, or a child's spoonful. Mediocris also means indifferent, as to quality.
Medius, middle. Media nocte, in the middle of the night.
Melior, melius, better.
Minatur, minaretur, threatens. Minante, threatening.
Minimus, very small. Cochleare minimum, a teaspoonful.
Minutum,[1] a minute.
Misce, mix. Bene misceatur, let it be well mixed.
Mite, send.
Mittatur (singular), let it be sent. Mittantur (plural), let them be sent.
Mittatur sanguis, take blood away; *i. e.*, bleed the patient.
Mistura, mixtura, a mixture.
Mitigatio, mitigation, alleviation. Donec dolor is mitigatio sit, until the pain is easier.
Mitigatus, a, um, mitigated, lessened.
Modicus, middle-sized.
Modus, a manner. Modo præscripto, in the manner directed.
Moles, a mass, a lump, a piece. Sumat molem instar nucis moschatæ, let him (or her) take the bigness or size of a nutmeg.
Mollis, molle, soft.
Molestus, troublesome. Molestor, to trouble, to be troublesome. Molestante dolore, when the pain is troublesome. Molestante tussi, when the cough is troublesome.
Mora, delay. Sine morâ, without delay.
Mos, moris, manner. More solito, in the usual manner; also, in the same manner as I am in the habit of prescribing it to other people.
Mortarium, a mortar. Mortario aheneo, in the brass mortar. Mortario marmoreo in the marble mortar. Mort. vitreo, in the glass mortar.

N.

Narthecium, a gallipot.
Nates, the buttocks.
Ne, lest, also, do not; as, ne tradas sine nummo, do not deliver the medicine without the money.
Necnon, also.
Niger, nigra, nigrum, black.
Ni, nisi, unless.
Nihil, nothing.
Nisus, an endeavor, an attempt, a straining, a motion, a straining to vomit, or go to stool.
Nimis, nimium, too much.
Nodulus, a little knot. Nodulo ligati, tied up in a piece of clean rag.
Nomen, nominis, a name. Signetur nomine proprio, write its common name upon the label.
Novem, nine.

[1] The word minutum, for a minute, is very barbarous Latin; we believe there is no such word; but the right Latin for a minute, Sexagesima pars horæ, is as long and as tiresome to write as "Semivitreous oxide of lead" for the simple word "Litharge."

Nonus, the ninth.
Novus, nova, novum, new.
Novissimè, very lately, the last of all.
Nocte, at night. Noctes, nights. Nocte maneque, night and morning. Alternis noctibus, every second night.
Nuper, lately. Nuperrime, very lately.
Nucha, the nape of the neck. Nuchæ, to the nape.
N.M., Nux moschata, a nutmeg. Sumat magnitudinem nucis moschatæ, take the bigness of a nutmeg.

Numeri. Numbers.

1. or j. unus, una, unum, one.	7. or vij. septem, seven.
unius, of one.	septimus, seventh.
2. ij. duo, duæ, two.	septimana, or,
duorum, of two.	7 mana, a week.
duobus, in two, to two.	8. viij. octo, eight.
3. iij. tres, tria, three.	octavus, eighth.
tribus, in three, to three.	9. ix. novem, nine.
trium, of three.	nonus, ninth.
ter, three times.	10. x. decem, ten.
4. iv. quatuor, four.	decimus, tenth.
quartus, a, um, fourth.	11. xj. undecim, eleven.
quater, four times.	12. xij. duodecim, twelve.
5. v. quinque, five.	20. xx. viginti, twenty.
quintus, fifth.	24. xxiv. viginti quatuor,
6. vj. sex, six.	twenty-four.
sextus, sixth.	

O.

Obstante, hindering, preventing.
Occasio, occasion, opportunity.
Octo, eight.
Octavus, eighth. Octava quaque horâ, every eighth hour.
Olim, some time ago.
Olla, a pot, a gallipot.
Omnis, all. Omni mane, every morning. Omni horâ, every hour. Omni bihorio, every two hours. Omni nocte, every night. Omni ¼ horâ, Omni quadrante horæ, every quarter of an hour. Tere omnia, rub all together.
Omninò, quite, wholly, entirely.
Optimè, very well, as well as possible.
Optimus, ma, mum, best.
Opus, need, occasion. Si opus sit, or fuerit, if it be necessary.
Ovillum jusculum, mutton broth.
Ovum, an egg. Vitell. ovi, the yolk of an egg. Ovorum, of eggs.

P.

Pannus, a rag. Pannus linteus, a linen rag. Pannus laneus, Pannus è lanâ, a piece of flannel.
Paroxysmus, a paroxysm, a fit, a convulsion fit.
Pars, a part. Partes, parts. Parti dolenti, to the pained part.
Partitus, parted. Partitis vicibus means that you are not to give a medicine all at once, but divide the dose according to the directions most commonly previously given; for example, if a purging or emetic draught, half or a third (as the case may be) to be taken at first, and the other half or third at a certain distance of time, if the former quantity be not found sufficient to produce the desired effect.

Parvus, little. Cochleare parvum, a teaspoonful.
Parum, a little. Parumper, a little.
Pauculum, pauxillum, paululum, a little.
Pectus, the breast. Pectoris, of the breast.
Pediluvium, a bath for the feet.
Per, by, or through.
Pergo, to go on with. Pergat in usu medicinarum, continue the medicines as before.
Peractus, } completed, perfected, quite done, gone through with; as, Peractâ
Perfectus, } operatione emetici, after the emetic has quite done operating.
Perfricetur, let it be rubbed. Perfricandus, to be rubbed.
Pensus, weighed. Accuratè pensi, accurately weighed.
Perpetuus, perpetual. Fiat perpetuum, keep it open (when it refers to a blister).
Pluvialis, also pluviatilis aqua, rain-water.
Pharmacopœia, the dispensatory.
Pollex, the thumb. Pollex pedis, the great toe.
Pomeridianus, postmeridianus, in the evening or afternoon, time of the day.
P. R. N., Pro re natâ, occasionally, according as circumstances may occur, according as the symptoms may require.
Poculum, a cup.
Pomum, an apple. Pomi, of an apple.
Pone, behind. Pondere, by weight.
Porro, moreover. Post, after. Postea, then, afterwards.
P. M., Post meridiem, afternoon, in the afternoon, after twelve o'clock at noon.
Potus, drink, any kind of beverage.
Postulet, postulent, may require, demand.
Præcipue, especially.
Præparatus, prepared.
Præparo, to prepare. Præparentur, let them be prepared.
Primus, ma, mum, the first. Primò, first of all. Primo mane, very early in the morning.
Prior, prius, the former, the first.
Priusquam, before that.
Pro, for. Pro re natâ, p. r. n., occasionally, etc. Pro ratione, according to, or in proportion to; as, pro ratione ætatis, according to the age of the patient.
Proprius, a, um, proper. S. N. P., Signetur nomine proprio, mark it with its proper direction.
Pruritus, an itching. Pruriens, itching. Dolichos pruriens, cowhage.
Psora, the itch.
Pulvis, a powder. Pulveres, powders. Pulveribus, in powders.
Purificatus, a, um, purified.
Pyxis, pyxidis, a pill-box, or lozenge-box.

Q.

Quadrans, quadrantis, quadrante, quarter. Omni quadrante horæ, every quarter of an hour.
Quacum, with which.
Quamprimum, as soon as possible, without the least delay.
Quartus, a, um, the fourth.
Quâqua, every. Quâvis (fœm), with any.
Quater, four times. Quatuor, four. Quarta pars, a fourth part.
Quaque (at the end of any Latin word), and.
Quem, quam, quod, which (the accusative case).
Qui, quæ, quod, which (the nominative case).

Quibus, to which, with which.
Quibusdam, to or with some. Cum guttis quibusdam, with a few drops.
Quilibet, quælibet, quodlibet, gen. Cujuslibet, abl. Quolibet, any.
Quiescat, goes to rest, is easier.
Quinque, five. Quintus, a, um, the fifth. Quinquies, five times.
Quinquina (cinchona), Peruvian bark.
Q. S.—q. s., Quantum sufficiat, as much as may be sufficient.
Quorum, quarum, of which. Quos, quas, which. Quocum, quacum, with which. Quovis, with any.

R.

Ratio, a reason, also a proportion. Pro ratione ætatis, according to the age of the patient. Pro ratione doloris, according to the urgency of the pain.
Raucedo, hoarseness.
Recipe, take. Recipe (taken substantively), a prescription.
Regio, a region (an anatomical term for certain parts of the body); as, regio epigastrica, the epigastric region; regio lumborum, the region of the loins; appl. emplastr. regioni umbilicali, to the umbilical region or parts in the neighborhood of the navel.
Redigo, to reduce. Redige, reduce. Redigetur, may be reduced. Redigatur, let it be reduced.
Redactus, a, um, reduced. In pulv. redact., reduced to powder.
Refrixerit—pl. int—the subjunctive future of refrigesco, to cool.
Reliquus, a, um, the rest, the remaining part.
Remedium, a remedy. Continuandur remedia, go on with the same medicines as before.
Repetatur, let be repeated, repeat.
Repetendus, to be repeated.
Respondeo, responderit, shall have answered. Donec alvus ad sedes ij vel iij responderit, until two or three stools shall have been procured.
Ribes, currants. Gelatina ribesiorum, currant jelly.
Ruber, rubra, rubrum, red.
Rubus idæus, raspberry.
Retinendus, to be retained or kept.

S.

S.V.R., Spiritus vinosus rectificatus, rectified spirit of wine.
S.V.Ten., or tenuis, proof spirit.
Sæpe, often; sæpius, oftener; sæpissime, very often.
Saltem, at least.
Sanguis, blood—inis, of blood. Sanguinis missura, blood-letting.
Saphena vena, the ankle vein.
Satis, enough; quantum satis, a sufficient quantity.
Scapula, the shoulder blade. Inter scapulas, between the shoulders.
Scilicet, to wit, namely.
Scrobiculus cordis, the pit of the stomach.
Secundus, a, um (adjective), second.
Secundum (preposition), according to.
S.A., Secundum artem, according to art; that is, you are to use your own ingenuity to do it in the most proper and scientific way.
Sed, but.
Sedes, a stool—plural, stools.
Semi, or semis, half. Semihora, half an hour. Semi drachma, half a drachm.
Sesqui, one and a half, as sesquihora, an hour and a half. Sesquiuncia, or sescuncia, an ounce and a half. Sesquidrachma, a drachm and a half. Remember well to attend to the difference of these two words, for

many young men, by not knowing that sesqui means one and a half, but confounding it with semi, have made bad mistakes.

Semper, always.

Semel, once.

Septem, seven.

Septimana, a week, seven days. Septimus, seventh.

Sequens, following.

Serum lactis, whey. In sero lactis vinoso, in wine whey.

Serum is also the watery part of the blood which separates from the red part, or crassamentum, on standing until cold.

Sex, six; sextus, sixth.

Si, if. Sive, or; whether.

Signatura, a label or direction.

Signetur, let it be marked, directed, written upon.

S.N.P., Signetur nomine proprio, mark it with the name it is usually known by.

Simul, together; as, terantur simul, let them be rubbed together. Simul ac, at the same time that.

Sine, without. Sine morâ, without delay.

Singultus, hiccup.

Singulus, a, um, each; in singulus, in each; singulorum, of each.

Sinister, tra, trum, the left. Auri sinistro, to the left ear.

Sitis, thirst; si sitiat, if thirsty.

Solitus, accustomed.

Solus, alone; only.

Solutus, a, um, dissolved, also loosened; as, donec alvus soluta fuerit, until a stool is procured.

Solve, dissolve.

Somnus, sleep. Hora somni, at bedtime.

Spina, the spine, the backbone; also, a thorn.

Spissus, thick. Spissitudo, thickness of consistence.

Statim, directly, immediately.

Stent, let them stand. Stet, let it stand.

Sternutatorius pulvis, sneezing powder, snuff.

Stupa, tow.

Sub, subter, under. Sub finem coctionis, when the boiling is almost finished. Sub, prefixed to a word, implies diminution, or a process not completed; also, in many words has the same signification as the termination ish in English words, as sub-niger, blackish, not quite black. Subtepidus, lukewarm. For its meaning when applied to terms of chemistry, as subcarbonas, submurias, the pupil must study his chemical nomenclature.

Subactus, a, um, subdued, dissolved.

Subitus, a, um, Subitaneus, sudden. Subito (adv.), suddenly.

Subtepidus, a little warm, lukewarm.

Subige, dissolve it, make it unite. Subdue quicksilver with lard or balsam of sulphur.

Subinde, frequently, now and then.

Subtilis, subtile, reduced to fine powder. Pulv. subtilissimus, the very finest powder.

Sumat, let him take. Sumatur, sumantur, let it be taken, take.

Sudor, sweat.

Superbibo, to drink after taking anything; as, chamomile tea or warm water after an emetic; or a cup of water or any liquid medicine to wash down a dose of any sort of pills.

Superinfundo, to pour upon.

Supra, above. Supradictus, above mentioned.
Syncope, a fainting fit.

T.

Tabellæ, tabulæ, lozenges.
Talis, such. Sumat talem, let him take such a one as this.
Talus, the ankle.
Tam, so. Tamen, yet.
Tactus, the touch.
Tænia, the tapeworm.
Tempus, temporis, time.
Tempora, the temples. Temporibus, to the temples. Tempori dextro, to the right temple. Tempori sinistro, to the left temple.
Temperies, temperamentum, temperament, degree of heat.
Tenacitas, tenacity. Ad debitam tenacitatem, of a proper degree of tenacity or consistence.
Teneo, to hold. Tenendus, to be held.
Tenuis, weak, thin, small, slender.
Tepefactus, warmed, made warm.
Ter, three times, thrice. Ter quaterve, three or four times.
Teres, teretis, round, taper; also, teres is a name for the long and round worm infesting the human body, qu. d. vermis teres.
Tergum, the back. A tergo, behind.
Tero, to rub. Tere (imperative), rub. Terendus, to be rubbed. Terantur, let them be rubbed.
Tertius, tertia, tertium, the third.
Testacea, the prepared powders made of oyster-shells, egg-shells, crabs' claws, etc.
Thorax, the chest. Thoracis, of the chest.
Thus, fankincense.
Tinea, capitis, scald head.
Torrefactus, toasted.
Tres, tria, three; tribus, in three, to three.
Triduum, three days.
Trituratio, a grinding. Trituratus, triturated, ground. Tritus, ground.
T.O., Tinctura Opii, what is commonly called Laudanum.
T.O.C., Tinctura Opii Camphorata, Camphorated Tincture of Opium, called, formerly, Paregoric Elixir. This tincture is now called by the British Pharmacopœia, edit. 1867, Tinctura Camphoræ Composita.
Trans, through. Cola trans chartam, filter through filtering-paper.
Tussis, a cough. Tussi molestante, when the cough is troublesome.

U.

Ultimus, ultima, mum, the last. Ultimó præscript, which was last prescribed.
Umbilicus, the navel.
Unà (an adverb), together.
Uncio, an ounce. Unciam cum semisse, an ounce and a half.
Undecim, eleven.
Unus, una, unum, one. Unius, of one. Uni, to one.
Urgente tussi, when the cough is troublesome.
Urgeo, to urge, to oppress, to be troublesome or painful.
Usus, use. Pergat in usu remediorum, continue the use of the medicine as before.
Usque, ad, up to, as far as.
Ut, as that, so that; in the same manner as.
Utendus, to be used.

Utatur, let him make use of.
Uterque, utraque, utrumque, both. Utriusque, of both. Utrique, to both, to either. Admoveantur hirundines ij tempori utrique, apply two leeches to each temple.
Utriuslibet, of whichever of the two, or more, the patient likes best.

V.

Vaccinatio, the act of inoculating for the cowpock.
Variola vaccinæ, the cowpock.
Vaccinum lac, cow's milk.
Valde, very, very much.
Valeo, to avail; si non valeat, if it does not answer.
Variola, the smallpox.
Varicella, the chickenpox.
Vas, a vessel. Vasis, of a vessel. Vase clauso, in a covered vessel. Agitato vase, shaking the vessel.
Ve, vel, or; either; -ve is never at the beginning, but at the end of, a word.
Vertebræ, the joints of the neck, back, or loins; the vertebræ, altogether, form that column of bones which is called the spine.
Verus, true, real, genuine.
Vena, vein. Vena saphena, the ankle vein.
Venæsectio, bleeding. Fiat venæsectio, bleed him.
V.S.B., Venæsectio brachii, bleeding in the arm. Fiat venæsectio in venâ saphena, bleed the patient in the ankle vein—or, it may be understood, to bleed wherever you can find the best vein at the top of the foot to get blood from.
Vespere, in the evening.
Vespertinus, in the evening, as horâ vi^{a}, vespertina, at six o'clock in the evening.
Vehiculum, a vehicle; that is, whatever liquid or any other eatable or drinkable we take a medicine in, as barley-water, whey, jelly, or panada, etc.
Viginti, twenty. Vicesimus, vigesimus, the twentieth.
Vinosus, vinarius, of wine. Cyathus vinarius, a wineglass.
Vices, turns; ad duas vices sumendus, to be taken at twice; that is, half to be taken at first, and the other half in some time after.
Vicibus partitis. See Partitus in P.
Vice, in the room of. Vix, scarcely, hardly. Ut vix sentiatur, so that it can scarcely be perceived.
Vitellus, the yolk of an egg.
V. O. S., Vitello ovi Solut^{m}; dissolved in the yolk of an egg.
Vitrum, a glass. Vitreus, made of glass.
Vires, strength; si vires permittant, if the strength will bear it.
Vomitio, a vomiting. Vomitione urgente, when the vomiting is troublesome.
Vultus, the countenance.

OBSERVATIONS ON THE MANAGEMENT OF THE SICK ROOM.

In the treatment of disease, as much depends on the proper management of the patient, or, as it is usually called, *nursing*, as on the remedial powers of medicines appropriate to the exigencies of the case. How many, in fact, have owed their lives to the sedulous and skilful attention of their nurse or friends, wholly independent of professional assistance! and, on the other hand, what numbers have been sacrificed to a want of knowledge of the proper government of a sick room, in spite of the most judicious treatment on the part of the physician! This most important subject has been strangely

overlooked by both lecturers and writers on the practice of medicine. We are acquainted with but two treatises on the subject, in our language, that can be referred to with confidence—the general observations prefixed to "A Practice of Physic," by the late Dr. Dewees, and "The Domestic Management of the Sick Room," by Dr. A. T. Thomson, of both of which we shall freely avail ourself in the following pages.

Ventilation in the Sick Room.

Where it is possible, the room in which the patient is confined should be large and lofty, and in all cases provided with a chimney; the upper sashes of the windows should be capable of being let down, which is not always the case; in a word, the room should be of such a construction as to permit the freest ventilation and renewal of the air without injury to the patient. Fortunately for the comfort as well as for the benefit of the sick, a great change has taken place as regards their treatment in this respect; at one time, and that not many years since, it was considered essential to their recovery that air should be carefully excluded from their apartments, and every means was taken to accomplish this result; but a more rational mode of treatment is now generally adopted, though physicians occasionally meet with individuals who obstinately adhere to the idea that all access of the outer air is injurious to the sick.

The air of a sick chamber soon becomes impure, and must be changed by the admission of fresh air from without, and not, as is too frequently attempted, by the use of disinfecting agents in the chamber itself; which, although they may mask or destroy offensive odors, only tend to vitiate the air still more. It may be confidently asserted that no disinfecting or fumigating agent is capable of rendering the air of a sick chamber so pure and salutary as it can be made by proper attention to cleanliness and free ventilation.

This latter can in most cases be accomplished without risk to the patient, by proper management, and should never be neglected. It should be regulated by the season of the year, the state of the atmosphere, and the character of the disease. In winter, in consequence of the draught occasioned by the fire, a renewal of the air of the room takes place to a greater or less degree; but a sick chamber should, if possible, be heated by an open fire, and not by a stove, as the air is thus more rapidly changed, and the unpleasant emanations caused by a large surface of heated iron are obviated. The state of the weather should also influence the mode of ventilation, for it must be obvious that, if it is damp, it would be injurious, if admitted into a sick room directly or in large quantities. The character of the disease should always be considered; as a general rule, all acute affections require more ventilation than those of a chronic nature, except such as are attended with offensive discharges. No precise rules, however, can be laid down on the subject of ventilation as respects the mode in which it is to be attained; this must, in a great measure, be left to the discretion and good sense of the attendants.

Ventilation is especially required in infectious and contagious disorders, as, in close, ill-ventilated apartments, the power of infection is greatly augmented, and is, as it were, concentrated. The infectious miasm is greatly weakened or diluted by a free access of air, and its powers much augmented by a damp, close atmosphere. Next to ventilation, and of equal importance, is the

Temperature of the Sick Room.

There is a very general, but erroneous, opinion among nurses, that a sick person should be kept very warm, to prevent his taking cold, and, consequently,

the temperature of the chamber is maintained at a fever heat, to the great inconvenience and positive detriment of the patient. The best general temperature of a sick room is from 60° to 70° F., to be regulated by the thermometer rather than by the sensations of the sick person, as these are oftentimes morbid and deceptive, but at the same time are not to be wholly disregarded; thus, where the temperature is agreeable to the sensations of the attendants, and the patient, notwithstanding, complains of chilliness, it should be increased a few degrees.

In febrile complaints, nothing conduces more to the comfort, and nothing is more proper than a reduced temperature, as it materially aids the physician in relieving the morbid heat of the patient's body, and the increased action of the arterial system. Thus, in a patient in the hot stage of fever, it is suprising to see the almost immediate relief experienced by the admission of cool air into the chamber; a tranquil state ensues, replacing his former jactitation and restlessness; his skin becomes cooler; his respiration, from being hurried and laborious, becomes calm and gentle; his pulse less frequent and active; and, in many cases, a placid and refreshing sleep comes on; or he breaks out into a general perspiration.

Where, on the other hand, the temperature of the room is maintained at a temperature equal to, or nearly equal to, that of his body, every morbid symptom will be much aggravated, and his condition rendered still more deplorable. But, whilst a moderately depressed temperature is beneficial in many diseases, it exercises a decidedly injurious effect in others; in affections of the lungs, even a slight change in the thermometer will often cause an attack of cough and an augmentation of the symptoms.

During convalescence, the air of a sick chamber should be frequently renewed, and the temperature kept at about 60° to 65°; but no sudden transitions permitted, as nothing is more essential than a guarded care against extremes and rapid changes of heat and cold.

It is of equal importance that a proper attention should be paid to the temperature of the patient as regards the amount of his covering, for constant errors are committed by nurses in this respect. When a sick person complains of feeling cold, it is always proper to provide him with additional covering; but, if reaction takes place, and heat of skin ensues, it is seldom thought advisable by the attendants to remove any of the now superfluous clothes, "as he might take cold;" the consequence is that a febrile condition is produced, with a dry, hot skin, without a sign of perspiration. If some of the bedclothes be removed, however, this will soon make its appearance, to the great relief of the patient. Every nurse should be aware that there is a sweating temperature, and that, when this is transcended, perspiration will not take place, and will cease if it be present. Attention to a simple rule on this point will obviate any difficulty—to add covering when the patient complains of chilliness, and to remove it when he experiences too much heat.

Cleanliness in the Sick Room.

Nor is attention to cleanliness of less importance, for, although much is accomplished, in preventing a foul and offensive atmosphere, by proper ventilation, this is not sufficient, and is not always practicable. The observance of this is one of a nurse's most important duties; and she should be careful to remove anything that is capable of emitting an unpleasant smell, or of giving out an injurious gas, as speedily as possible. All evacuations are to be taken from the room at once, and never suffered to taint the air, under any pretence whatever. The bedclothes, as well as the personal clothing of the patient, should be changed as frequently as circumstances will allow, and no dirt suffered to accumulate in any part of the room. All articles used by the

patient in taking his food, medicine, etc., should be cleansed as soon after they have been employed as possible. No slop-basin or slop-pail should ever be allowed to remain in a sick chamber.

A patient's face and hands should be frequently wiped with a towel moistened with cold water, or vinegar and water, in all cases in which there is no danger of causing chilliness, and he should be allowed to rinse his mouth and clean his teeth, several times a day; when he is unable to perform the latter office for himself, it should be done by the nurse. This is very grateful to patients in fever, when the tongue is dry or coated with fur or tenacious mucus.

Whilst every means of insuring cleanliness in the sick room should be practised, it is to be accomplished with as little noise and bustle as possible; otherwise it becomes annoying and injurious to the patient. It is not requisite that the room should be swept, nor that the furniture should be dusted, every day. What is done should always be performed in the morning, as the patient is usually better able to bear the little noise and bustle necessarily attendant on these operations, after a night's rest and quiet. When the carpet is swept, it should be sprinkled with moist tea leaves a short time previous, to prevent dust from rising.

Quiet in the Sick Room.

In most diseases, and especially in those attended with fever, nothing is more annoying and distressing to the patient than noise; hence, the utmost quiet should be strictly maintained. All unnecessary conversation should be avoided, as a sick room is an unfit place for gossiping. If conversation be carried on, however, it should be in such a tone of voice that the patient may comprehend it, for nothing is more injudicious or hurtful to a sick person, especially if of a nervous temperament, than the mode usually adopted by the attendants of conversing in whispers, as it leads him to imagine that it refers to something they are afraid or unwilling to communicate to him, and hence, he fatigues himself by endeavoring to ascertain the purport of conversation, or gives way to despondency; on this account, it is better that all talking that is required should be carried on in a moderate tone of voice, and not in whispers, as much less likely to disturb the patient or to excite his attention.

In some cases, especially in those of a nervous character, on the contrary, cheerful conversation is of much benefit to the patient, provided it is not continued so long as to fatigue him.

A great fault in many nurses is being always in a bustle, "putting things to rights," or "fixing the room," thus constantly disturbing the patient, and preventing him from sleeping; nothing is more annoying to a sick person than this bustle or this constant recurrence of noises, which, however insignificant in themselves, render him nervous and impatient, from their repetition. Most of these may be prevented by an attention to order and method on the part of the nurse.

One common source of annoyance to a sick person arises from a frequent opening and shutting of his door, more especially if the lock or hinges are not in good order. In many cases, the door may be kept permanently open, and the patient protected from the light and draught of air by means of a screen. Where this cannot be done, the door should never be opened, except when it is absolutely required, and it is by all means to be avoided whilst the patient is asleep. One means of avoiding a too frequent opening and shutting of the door is to permit no person to enter the room except such as are required to assist in attendance on the patient.

Examination and Preservation of the Excretions.

This is of much importance in many cases, as it enables the physician to judge with some degree of certainty of the condition of the patient and of the progress of the disease. It should never be trusted to a nurse, as it is very rarely that their account can be depended upon. In all cases where the physician deems it necessary, the nurse should be directed to preserve the excretions for his inspection; but they should never be retained in the sick room.

Administration of Medicine, etc.

However skilful the physician may be, and however judicious his treatment, it is rendered perfectly nugatory, if the remedies he orders are not administered according to his directions, as the cure of the patient depends in many cases on the regular application of the prescribed remedies. It is, therefore, the duty of the attendant on the sick to follow implicitly the directions of the physician, as well in exactly complying with his orders, as in doing nothing that she has not been ordered to do. At the same time, there are exceptions to this rule, in which a suspension of the remedy, or a deviation from the order of the physician, is not only allowable, but is absolutely required. Thus, from idiosyncrasy or some other cause, the remedy in the doses ordered may have no effect, or may produce one widely different from that intended or expected. In such cases, it is evident that a strict adherence to the directions of the physician would be productive of evil; but he should be immediately apprised of the circumstance.

Nurses, however, more frequently commit errors in the administration of drinks and nourishment than in that of the prescribed medicines. In the former, they are apt to imagine that they are as good, if not better judges than the physician, and, in consequence, thwart the best directed treatment. The nurse should as scrupulously adhere to the directions of the physician as regards drink and nourishment, as with the doses and times of administration of medicines; nor should the exhibition of food or drink be left to her discretion more than that of remedies.

One error is very common, that of giving them too largely or too frequently; this should be guarded against, as far as possible, by the physician prescribing the quantity and quality of food or drink, as well as the times of giving it, with as much precision as he prescribes doses of medicine and the periods of their exhibition. In fact, in the treatment of the sick, as little as possible should be left to the discretion and judgment of the nurse or attendant of the patient.

Furniture of a Sick Room.

Where a disease is of a serious character, or appears likely to be protracted, it becomes of importance that the chamber the patient is to occupy, if circumstances will admit of it, should be selected and arranged in such a manner as will most minister to his comfort, and aid his recovery. It should, if possible, be large and airy, with a northern aspect, so as to avoid the glare of the sun; but, in towns, a room exposed to the sun is preferable to one fronting on the street, in which the patient is constantly disturbed by the noise of passing vehicles, etc. As mentioned under the head of ventilation, it should always be provided with an open chimney, that a due circulation of air may take place.

No article of furniture that is not required should be suffered to remain in the room, as the dusting and arranging it will cause unnecessary noise and bustle, annoying to the patient. Two tables are wanted in most cases: one of a small size, to stand by the side of the bed, to hold such articles

as are in immediate use, as the medicines he is taking, the spoon or glass in which they are administered, etc.; but nothing should be permitted to remain upon it, except articles frequently wanted. The other table, which should be large, and adapted for the reception of medicines not in immediate use, such as spare spoons and glasses, should contain a drawer, supplied with a roll of old and soft linen, a sponge, scissors, a spatula, a roll of muslin and one of flannel bandage, some lint, some adhesive plaster, a pincushion well supplied with pins; in fact, all such articles as may be needed. It may appear unnecessary to allude to these things; but it has happened to every medical man, to observe that, without such previous preparation, much of his time is wasted in the search for what is wanted.

Where a second table is inconvenient, the top of a chest of drawers can be employed instead, for bottles, glasses, etc.; and one drawer should be appropriated to the reception of the various articles above enumerated; another should contain towels, a free supply of which should always be at hand; but none are ever to be used for the reception of dirtied articles of clothing, which should always be at once removed from the room. The washstand should be provided with additional basins, one of which should be of small size; and a large pitcher of water should be always kept in the room.

If there is a looking-glass in the room, it should be placed in such a position as not to be in view of the patient. A large sofa, or a small additional bed, is constantly required, as in certain cases where the patient is unable to sit up, he finds much comfort in being removed to it; it is also required when his bed is to be made. An invalid or easy chair is also productive of much benefit in certain cases; and where it can be commanded, it should be of such a construction as will admit of changes, so as to vary the position of the patient at pleasure.

What is called a French bedstead, without curtains, is the best adapted to the sick room. The four-post bedstead, when used, should not be furnished with curtains, as these tend to exclude the air, and to retain smells and a vitiated atmosphere. In all cases, a mattress is preferable to a feather-bed; it may be placed over the latter, when greater softness is required. The pillows should be elastic, but so firm as not to permit the head of the patient to sink in them, as this prevents coolness and a due circulation of air. The bed-coverings should be as light as is consistent with warmth and comfort; hence, Marseilles quilts should not be used, as from their weight they oppress the patient, without affording as much warmth as a light blanket.

The change of bedclothes, and shaking up the bed or mattress, must be regulated by the character of the disease and the condition of the patient. In febrile complaints, it should be done, if the strength of the patient will admit, twice in the twenty-four hours. When there is much restlessness, it will be found advantageous to move him night and morning to a large sofa, or to another bed; this tends to promote sleep, and to insure a proper airing of the beds. When he is thus moved, the clothes of the bed he has left should be turned down and fully exposed to the air, which will render so frequent a change of the sheets less necessary than would otherwise be required. When there is only one bed, and in febrile diseases, the sheets which have been used at night are to be replaced by others in the morning, and freely exposed to the air during the day, and again used at night. When the patient is too much debilitated to be moved from bed to bed, he should be merely removed to the other side of his bed, and the one he has left properly arranged by changing the linen, beating up the bed, etc.; but these changes are never to be made whilst he is in a perspiration.

If a fire in the room is required, it should not be made use of to prepare

the food or drinks of the patient; this should be done elsewhere, as well to avoid the smell emitted by the heated articles, as the noise and bustle caused in their preparation.

Proper use of Utensils for Evacuations, etc.

As it is of the utmost importance to the patient that he should be spared all unnecessary fatigue, some precautions are to be used to prevent this during his evacuations; and one of the duties of a nurse is to enable him to perform those offices with the least expenditure of strength. When the patient is feeble, he should never be allowed to rise to fulfil the calls of nature, and, therefore, a bed-pan and urinal should always be provided; by means of these, the evacuations can be performed with ease, and without exertion. Many persons, it is true, have an aversion to using them; but this difficulty can generally be overcome by a proper representation of their advantages. One of the objections commonly made is that the use of a bed-pan gives them pain in the back; and this is often the case where the patient is not properly supported; but can always be prevented by placing a pillow in the hollow of the back, before the pan is used.

In the case of giving drinks or nourishment, much unnecessary fatigue may be spared to the patient. Owing to the form of the vessels usually employed to administer drinks, without the sick person is raised in bed to receive them, much of the fluid is apt to be spilt on the bedclothes, to his great discomfort. Hence, a tumbler, teacup, or bowl should never be employed for this purpose, where the patient is too feeble to raise himself without inconvenience. The sick cup, as it is called, should therefore be employed for this purpose, as it spares all fatigue, and prevents any spilling of fluid on the patient or on the clothes.

When the medicine or food is taken in spoonful quantities, and in cases of nauseous medicines to be administered to children, the medicinal spoon will be found very useful. This is a spoon with a hollow handle, with an opening at its extremity; the bowl is provided with a hinged lid, but is open at the apex. When a fluid is poured into it, and the lid closed, the pressure of air at the opening at the end of the bowl will prevent any of the fluid escaping, as long as the orifice at the end of the handle is closed, but is projected with some force when this opening is free. By means of this contrivance, medicine or food may be conveniently administered without the patient being obliged to be raised in bed, or in spite of resistance on the part of a child.

DOSE OF MEDICINES.

The doses of medicinal substances, being specific as regards each other, can only be learned by experience; but their remedial or active powers do not always increase with an increase of the dose: thus, if a purgative dose of calomel be ten grains, an increased quantity of the medicine will not induce an equivalent increase in the purgation, though it may cause other consequences. The dose in which a medicine is given often determines its specific action; two grains of ipecacuanha will usually quiet the stomach, or act as a diaphoretic, whilst thirty will produce active emesis; and, in like manner, almost every medicine displays different powers, according to the dose in which it is administered.

Dr. Paris states "that powerful doses are disposed to produce local rather than general effects." This is proved by experience, in many cases, but does not hold good in all: thus, many of the active poisons cause general effects in both large and small doses, and their virulent action is in general proportionate to the quantity taken. In most of what are termed the alterative

medicines, however, the alterative action is only displayed when they are administered in small, but long-continued doses, and does not take place when they are taken in such quantities as to excite much local action. It is erroneous to suppose that a medicine is devoid of power, or does not exert an influence on the system, because no marked effect immediately follows its exhibition; for, as is observed by Dr. Barlow, "it is very possible that practitioners often err, especially in the treatment of chronic maladies, from requiring an obvious effect from each dose administered; where it is ascertained that a medicine actually possesses inherent powers, the slow and almost imperceptible exercise of these powers should not be despised. There is often more wisdom in seconding the efforts of nature than in superseding them." In fully admitting the truth of this remark, we are far from advocating the doctrine of Hahnemann, or his invisible doses; nor does it, in fact, accord with his views, for he gives a long catalogue of symptoms, caused by the administration of the minutest quantity of the articles of his materia medica.

So many circumstances influence the effects of medicines, that it is almost impossible to say what dose will produce identical effects in different individuals; but it has been sufficiently ascertained that, in the generality of patients, we may reasonably expect certain results from certain doses. The circumstances that influence the action of medicines, and the doses in which they are to be given, are:—

Age.—This exercises much influence; the young require smaller doses of a medicine to produce the desired effect than an adult; and the aged, although less susceptible to impressions than formerly, are unable to bear any forcible shock on their system. Various formulas or tables have been published for the graduation of doses to the respective ages; but none of them are as generally adopted as that attributed to Gaubius, which is as follows:—

Dose for a person in adult age being		1 drachm or	1.
That for a person from	14 to 21 years	would be 2 scruples or	$\frac{2}{3}$.
"	7 to 14	" $\frac{1}{2}$ drachm or	$\frac{1}{2}$.
"	4 to 7	" 1 scruple or	$\frac{1}{3}$.
"	4	" 15 grains or	$\frac{1}{4}$.
"	3	" 10 grains or	$\frac{1}{6}$.
"	2	" 8 grains or	$\frac{1}{8}$.
"	1	" 5 grains or	$\frac{1}{12}$.

This table, although mainly correct, is often found to be erroneous, when applied to particular cases. Dr. Paris, in his Pharmacologia, gives a formula devised by Dr. Young, which is simple and has been found to be generally correct; this is:—

For children under twelve years, the doses of most medicines must be diminished in the proportion of the age, to the age increased by twelve; thus:—

At two years to $\frac{1}{7}$, viz.:—

$$\frac{2}{2+12} = \frac{1}{7};$$

At 21 the full dose to be given.

But no scheme can be devised, founded on age alone, to which there are not many exceptions. Thus, children require proportionably larger doses of castor oil or calomel to affect them than adults, whilst, and especially when very young, they are exceedingly susceptible to the action of opium and its preparations.

Sex.—It is generally admitted that females require smaller doses of medicines than males, and, as a general rule, this may be correct; but so much

depends upon habits of life, temperament, etc., that the exceptions are almost as numerous as the examples.

Temperament also exercises much influence on the doses of certain articles of the materia medica; an individual of a nervous temperament is unable to bear with impunity doses of opium that scarcely act on the phlegmatic; the sanguineous are readily affected by the action of stimuli, etc.

Idiosyncrasy, or constitutional peculiarity, has more influence than either sex or temperament on the action of medicines. Some of these anomalies are very striking, and almost incredible, and evince the necessity of particular inquiries being made by the physician of every patient with whose constitution he is unacquainted. In some cases, opium, or any of its preparations, cannot be administered without producing the most distressing symptoms; in others, the smallest doses of calomel will cause salivation; whilst in others again it may be profusely given without inducing any effect on the salivary glands. In some persons, the mere vicinity to the poison oak (*Rhus radicans*) will bring on an unpleasant inflammation of the skin; whilst on other individuals this plant has no action whatever. It is often found that copaiba will cause a peculiar eruption, and the smell of ipecacuanha induce a distressing dyspnœa. So tartar emetic will be productive of ptyalism in some individuals even when applied to the surface of the body; blisters of cantharides will cause strangury in some patients, etc. In fact, these idiosyncrasies are so numerous that it would require a volume to notice in detail those already recorded.

Habit exercises an equal influence with idiosyncrasy in modifying the action of medicines. The usual consequence of a long-continued use of any remedial or stimulating substance, is to diminish the susceptibility of the organs on which it acts to its impression. Hence, to obtain its effects, it must be given in gradually increased quantities. In many cases, however, instead of a diminished, an increased action is caused by repetition of certain substances.

The influence of habit, in diminishing the susceptibility of the system to stimuli, is liable to fewer exceptions as regards vegetable than mineral substances, as may be daily remarked in the use of opium and tobacco. Dr. Christison accounts for this effect of habit in diminishing the influence of vegetable substances, by an increased power of the stomach in decomposing them; but it must also be attributed to a diminished susceptibility in the nervous system to their influence. But mineral medicines appear, in almost every case, to act with increased power by repetition, though the converse has been observed in some cases.

State of the System.—It is well known that, in certain deviations from a healthy or normal condition, a remarkable change is often observed in the action of remedies on the system. Thus, in severe pain, opium can be administered in doses that cannot be borne with impunity in a state of health; but this is still more the case in tetanus, in which scruple doses, frequently repeated, have been administered without producing any marked effects. This modifying influence of disease has been noticed with regard to many other remedies, as in mercury, which can be given in large and repeated doses, in a febrile condition, without causing salivation. Where there is a diminished sensibility of a part, or a comatose condition, the pain, or irritation caused by the application of stimulating or vesicating articles, not being felt by the patient, there is a risk of inducing a sloughing and destruction of the part to which they are applied, if care be not taken to remove them in time; so, also, the application of ammonia to the nostrils, to relieve fainting, has caused violent irritation, and even inflammation of the trachea, the patient being unable, from his condition, of appreciating or

expressing his sensation. Dr. Christison notices several fatal cases of bronchitis from this cause.

Time of Day at which medicines are administered also influences their action on the system. As a general rule, no medicine should be given soon after a meal, though, in the case of some of the irritants, as arsenic, corrosive sublimate, iodine, etc., it is often found most expedient to administer them whilst the stomach is filled with food, to avoid their local action on that organ. Dr. Paris observes, under this head: "Evacuating medicines ought to be exhibited late at night, or early in the morning; thus, substances of tardy operation, as calomel and the resinous purgatives, should be given at night, while saline purgatives, senna, etc., may be given in the morning. It would seem that during sleep the bowels are not so irritable, and, consequently, not so easily acted upon, which allows time for the full solution of the substance." In all cases, the exhibition of purgatives should be so timed that their operation may take place during the day, so as to avoid an undue disturbance of the patient at night. Other directions will be found in a subsequent part of the work.

Numerous other cases exercise much influence on the action of medicines, as climate, the imagination of the patient, the tissue or organ to which they are applied, etc.

Nor should the *variable activity* of a medicine be overlooked; this has occasioned more accidents than is generally supposed. Some remedies, and generally those of a vegetable nature, lose much of their activity by age, and, therefore, require to be given in large doses to produce the desired effect; hence, where a physician has been induced to increase the usual dose of some article, which in a recent or unaltered state is active, and even poisonous, but, from age or other deteriorating cause, has become weakened, serious accidents may occur, if he persists in administering the same doses of a parcel which is fresh, or which is obtained from another apothecary. In such cases, the safest plan is always to commence with the usual dose of the medicine, and to gradually increase it, if this be found necessary.

It should also be borne in mind that certain medicines have the power of accumulating in the system, or in other words, of not displaying their usual effects when given in small and repeated doses, until a certain quantity has been taken, when, on a sudden, symptoms resembling those caused by an overdose of the article, make their appearance. This has been remarked in relation to mercury, arsenic, and several other of the metallic medicines, as well as iodine, digitalis, etc. In giving remedies of this character, the physician should always be cautious, and not repeat the dose of them too frequently, because no sensible effect is produced at the expected time.

Intervals between Doses.—As every medicine produces a specific and definite action on the system, which, in most cases, continues for a certain time, and then ceases, it becomes necessary to renew or maintain the medicinal impression as long as is required to counteract the morbid condition of the system. In some cases, however, as in the case of an emetic or purgative given for the purpose of merely evacuating the stomach and bowels, the single effect produced may be sufficient, and no repetition of the dose is required. In most attacks of disease, on the other hand, the physician is obliged to prescribe medicines in such quantities as to produce a certain impression, and to repeat the doses at such intervals as will keep up the influence of this impression. Where, from a want of knowledge of the time during which the remedy he has administered will continue to exercise its full action on the system, he postpones a repetition of it for too long a period, although a fresh impression is made by each dose, but little real good is the result, and, from a want of continuity in the remedial impression, no progress is made towards a cure. Hence, a physician should be acquainted with the

usual duration of the action of the medicine he is administering, and order a repetition of the doses so as to keep the system under its influence. A nurse should, therefore, in all cases, follow his directions implicitly, as regards the periods at which medicines are to be given, for, by inattention to this rule, injustice is done to the physician, and, what is of more importance, the life of the patient is endangered. Where the diffusible stimulants are administered, especially those of an evanescent character, it is of much consequence that their influence should be kept up; and hence a neglect on the part of a nurse in giving them at the prescribed periods might cause a fatal collapse of the patient. It should be observed, however, that, except in cases where it is necessary thus to maintain the vital powers of a patient, this strict observance of the prescribed intervals between the doses of medicines is not intended to extend to the night, so as to disturb the invalid, as, in most diseases, sleep is one of the best restoratives; but advantage is to be taken of those moments when he is awake, timing the doses as nearly as possible to the designated periods.

Rules for the Administration of Medicines.—As has been stated, fluid medicines are usually administered in drops, teaspoonfuls, tablespoonfuls, etc.—an approximate measurement, which, although not precise or accurate, is sufficiently so in most cases, though not suited to medicines of a very active nature. As the generality of medicines are nauseous, it is necessary to modify, as far as possible, their disagreeable taste, which renders them so repugnant to patients, and often causes much difficulty in their administration, especially to children; but this modification must not be of such a character as to alter their properties. As regards young children, much difficulty will be obviated by the use of the medicine-spoon already described; this will also be found useful in cases of insanity, where patients refuse to take medicine or nourishment.

It is often found that patients experience much difficulty in swallowing pills, especially when these are of small size. The usual mode is to place the pill on the tongue, and to take a mouthful of water, when, on making an effort to swallow, both pass down the throat together; this plan is generally successful; but some persons appear to be unable to take a pill in this manner, and gorge themselves with fluid without effecting the deglutition of the pilular body; in such cases, by enveloping the pill in some bread, or some conserve or sweetmeat, so as to form a bolus, the difficulty is obviated.

Mixtures containing insoluble ingredients should always be shaken up before they are administered; otherwise, the first doses will contain but little of the active ingredients, whilst the last portions will, on the other hand, be more powerful than was intended. Where the article administered is of a volatile nature, it should be given the moment it is poured out, and the bottle containing the remainder immediately closed.

As each of the classes of medicinal articles requires the observance of certain rules to insure its full benefit, these will be briefly noticed in an alphabetical order.

Acids.—These are given to fulfil various indications; some acting as tonics, some as refrigerants, etc. As those most generally used are corrosive, they require to be diluted with some bland fluid, so as not to exercise too powerful a local action on the tissues with which they come in contact; nor should they be kept in a metallic vessel, nor given by means of a metal spoon. As most of them act on the enamel of the teeth in a very rapid and energetic manner, the mouth should be well rinsed with water after the administration of each dose; or they may be taken by being sucked up by means of a small glass tube, thus avoiding any contact with the teeth: this observation applies to many of the acid or super-salts; the usual solution of the sulphate of quinia, which contains free sulphuric acid, is known to act

on the teeth very rapidly, and, from a constant repetition of the doses, to injure them in a serious manner; and hence requires to be given with precaution.

Antacids are medicines intended to neutralize an undue or morbid acidity of the stomach or intestines. Their action is chemical, and they produce an innoxious compound which takes the place of the morbid fluid that causes the uneasiness or pain. In many cases, they act most efficaciously, when an emetic or cathartic has been previously administered. To obtain a permanent benefit from them, they should be combined with tonics, aromatics, etc.; as, when given alone, the relief afforded by them is but transient.

They are most advantageously administered early in the morning, or some time previous to a meal during the day. When the salt resulting from the union of the antacid and the morbid acid is purgative, the former is better given at bedtime; thus, the combination of the solution of potassa, of the carbonates of potassium and sodium, or of magnesium, forms salts with the gastric acid that act with some energy on the bowels; but this is not the case with chalk mixture or lime-water.

The patient should be restricted to light animal food and well boiled vegetables, avoiding sweets, acids, pastry, and, in fact, everything liable to increase the acescent condition of the stomach.

Antilithics and Lithontriptics are medicines supposed to possess the power of obviating or dissolving urinary calculi. That there are remedial agents capable of removing or relieving that morbid condition of the system on which a lithic acid diathesis depends, there can be no doubt; but it is very questionable if we possess remedies capable of dissolving calculi existing in the urinary organs. Among the antilithic remedies, those most generally employed are magnesia and its salts, the alkalies, soap, several of the acids, some astringent diuretics, many bitter tonics, etc. In cases of a lithic acid diathesis, however, much depends on the regulation of the diet of the patient; thus, when there is a superabundant secretion of uric acid, the food should contain as little azote as possible, and, therefore, be mainly of a vegetable nature; but, at the same time, care must be taken that the healthy action of the stomach is not impaired. There should be an avoidance of all indigestible substances, as fresh bread, pastry, salt meats, and even soups of all kinds; nor should malt liquors or acid wines be allowed. Where the white sand deposits or the phosphates occur, an acid system of diet is beneficial, with abstinence from all alkalies, soda-water, etc.; whilst lemonade, the acid wines, and fruits in moderation can be allowed with advantage.

Antispasmodics are remedies which have been considered to be endowed with the power of allaying spasms, and of calming or entirely removing irregular actions of the nervous system. As spasmodic action of the muscular apparatus and a morbid condition of the nervous centres may arise from a variety of causes, it has been found that the most opposite modes of treatment have been required; thus, in some cases, the most efficient antispasmodic is the lancet, whilst in others the morbid symptoms are best alleviated by the most active diffusible stimuli. It is not our intention to enter into the discussion of the mooted question of the *modus operandi* of antispasmodics, or whether there exists a class of remedies which are endowed with the power of exerting a direct control over spasmodic action. It is, however, shown by experience that the influence of this class of remedial agents is very limited in their operation and very various in their effects, and that to be efficient much discrimination is requisite on the part of the physician in the selection of the article best calculated to attain the desired effect. In general, what are termed antispasmodics have some of the properties of the narcotics, but differ from them in not causing stupor or insensibility. They are mostly substances possessed of a strong odor, and of a

more or less volatile nature; and hence also partake of the properties of stimulants.

Anthelmintics are medicines which are capable of expelling or destroying worms situated in the intestinal canal. Several kinds of worms are apt to infest the human intestines, and often give rise to distressing and even fatal symptoms. The medicines calculated to dislodge them are of various kinds; some act mechanically, as active purgatives, powder of tin, cowhage, etc.; some by being poisonous to the worms, as pink root, pomegranate bark, the vegetable bitters, etc.; and to this class belong, in all probability, the acrid, volatile, and resinous vermifuges, as turpentine, camphor, garlic, etc.; and the mineral remedies, as calomel, the preparations of iron, sulphur, etc.; some seem to act by asphyxiating the worms, as the fatty oils, the mucilages, etc.

Vermifuge medicines should be given in as simple a form as possible, and in as large doses as is compatible with their nature, and the age and condition of the patient; and hence the plan of administering them in the form of lozenges, biscuits, etc., is erroneous. One of the most certain of these remedies is the pink root (spigelia), either in the form of simple infusion, or united with senna or savin; in the first case, it should be followed by the administration of a brisk cathartic. In consequence of its sometimes causing temporary loss of sight, tremors, etc., which, although seldom dangerous, are apt to frighten the relations and friends of the patient, it is better, especially in cases of children, to administer the infusion in the evening, so that its effects may not be observed. The worm-seed oil is also another native anthelmintic of great power, but has the objection of having so disagreeable an odor and taste as to prevent its general use; the least unpleasant mode of giving it is in emulsion with mint or cinnamon water.

Whatever vermifuge is employed, and whatever success attends its administration, the treatment should not be confined to the mere expulsion of the worms; but the condition of the stomach and bowels should be attended to, and their tone rendered healthy by the use of tonics, and a well-directed and generous diet.

Cathartics are those medicines which increase in a greater or less degree the peristaltic action of the intestines. Cathartics have been divided into *laxatives*, which are characterized by acting mildly, without stimulating in any great degree the vessels of the intestines, or exciting a general disturbance of the system; and *purgatives*, which, in addition to evacuating the contents of the bowels, also promote secretions from their mucous coat, giving rise to copious watery stools. Some purgatives have a more violent action, occasioning nausea, faintness, pain, tenesmus, etc.; and some, acting in an overdose as acrid poisons, cause great irritation, and even inflammation of the intestines. But there is another and important character in the action of purgatives, which is that different portions of the intestinal canal are most affected by different cathartic substances; thus, calomel acts, in a marked manner, on the upper portions of the tube, as is shown by the increase of the biliary matters in the evacuations; gamboge also manifests its power on the stomach by often causing vomiting, but also, like the other drastics, causes much irritation in the large intestines; aloes, again, exerts very little action on the upper part of the canal, but spends its force on the lower portion; in fact, each purgative substance is characterized by a peculiarity of action as regards the part of the intestinal canal affected by it, and the nature of the evacuation it produces; and hence, it is of importance, in prescribing an article of this class, that it be suited to the impression wished to be made, and not, as is too frequently the case, selected at random. No class of remedies has been productive of more injury than the present, from their being resorted to without judgment, and from being persevered in for

too long a time: for, independent of the irritation they create and keep up in the bowels, they impair digestion, and too often lay the foundation of fatal organic diseases. Purgative medicines may be exhibited at any period during the day; but in all cases the patient should not be exposed to the influence of cold air; if, however, the circumstances are not urgent, it is better to administer them late at night or early in the morning, so as to prevent the disturbance and loss of rest to the patient, and also to secure their retention by the stomach; when given on an empty stomach, they also act more speedily and effectually than when this viscus is filled with food. To promote their action, and to obviate their griping effect, warm diluents, as chicken water, gruel, etc., should be freely taken after the first discharge. Where they operate too much, this inordinate action is to be checked by laudanum given by the mouth, or in the form of injections.

Many of these medicines are very nauseous, and so repugnant to the patient as to induce nausea and vomiting, and, therefore, require the addition of correctives. The taste of rhubarb is best disguised by being given in milk, and that of castor oil by the froth of porter. The disagreeable taste of infusion of senna is much lessened if made with cold water, or, if made in the usual manner, by the addition of strong coffee, black tea, or by a few grains of cream of tartar. Aloes is rendered more palatable by the addition of extract of liquorice. Magnesia is mixed more perfectly with water or milk, if it is poured on the surface of the fluid, and permitted to sink as it becomes saturated, than by the opposite course. The neutral salts are rendered more palatable by adding a small portion of lemon-juice to their solution, etc.

When a cathartic is given in the form of pill, its operation is always less speedy than when administered in powder or mixture; and it should be borne in mind that the drastic purgatives operate more mildly, and even effectually, in combination than when given alone, as is instanced in the compound cathartic pill.

Enemata or Clysters.—This mode of purgation is now generally employed in our large towns; but a great prejudice exists among many persons against its use, from a fastidious and mistaken delicacy. In consequence of the improved apparatus now to be procured, the administration of these remedies is attended with much less difficulty and exposure than formerly, when the pipe and bag or common syringe were employed; and, therefore, much of the objection to their use is obviated.

Clysters are of almost indispensable utility when it is necessary to evacuate the bowels as speedily as possible, or when the stomach will not bear the administration of a purgative by the mouth, and also in cases where it is of importance to make a direct application to the lower bowels, as in dysentery, colic, etc. Where it is merely wished to open the bowels, an injection of tepid water will often be found sufficient; where this is not found sufficient, the addition of table-salt, sweet-oil, or molasses, will, in most cases, induce a full discharge. In all cases the patient should be directed to retain the injection for as long a time as possible, and not to attempt to empty his bowels immediately after the reception of the medicine. Though clysters seldom can be forced beyond the great curve of the colon, and hence their local action is confined to the lower part of the bowels, still, in many cases, their purgative influence extends to the small intestines, and their administration is followed by full and copious evacuations. They are also directed for other purposes than evacuating the bowels, for, from the intimate connection of the rectum with the other pelvic viscera, impressions made upon it are speedily transmitted to the adjoining parts, and hence, remedies can be directed by this channel with much advantage. In irritation of the bladder or uterus, an anodyne injection into the rectum will often afford much relief.

In diseases of the lower bowels, also, clysters are of almost indispensable utility, as also in the dislodgment of ascarides seated in the rectum; nor are they less beneficial in those cases of sudden sinking of the powers of life where deglutition is impossible, and yet a prompt stimulating impression is requisite to save the patient; under such circumstances, clysters of some of the diffusible stimuli have proved of the greatest benefit.

Suppositories.—These are substances introduced into the rectum to induce a discharge of its contents. Their use is to some extent confined to the mere object of relieving costiveness, for which purpose a piece of soap of a conical shape, and of about an inch in length, may be employed; but in some cases, articles of a more stimulating character are necessary. In cases of costiveness in children, the introduction of the end of a small roll of paper, moistened with oil, for a few moments into the rectum, will, in many cases, be found sufficient. Recently, however, suppositories are more extensively used to act locally, or with the view of the gradual absorption of the medicinal substance. The former objection, that they frequently create irritation in the rectum, is, as far as their basis at the present time used is concerned, entirely obviated. Their mode of preparation and the apparatus used in making them will be fully described in the chapter on officinal preparations and directions, in another part of this volume.

In all cases where enemata or suppositories are employed, they must be introduced with care; otherwise serious injury may be done to the mucous coat of the rectum; instances have occurred where, from a careless insertion of the pipe of a syringe, the gut has been seriously affected, giving rise to fistula, etc. In most cases, the injection for a child under one year is about an ounce, which is to be gradually increased to five or six ounces, as it advances in age; to a youth, from ten to fifteen years old, a pint may be given; whilst an adult requires a pint and a half to a quart. Where, however, the injection is of an anodyne nature, to restrain discharges or to alleviate pain, the laudanum should be mixed with not more than half an ounce to an ounce of bland mucilage, so as not to excite contraction of the bowels by the stimulus of quantity.

Demulcents or Emollients are medicinal agents which diminish tone or irritation in the tissues to which they are applied, and thereby cause a relaxation of the parts, or sheathe and protect them from the action of substances capable of acting on them injuriously.

The term *Emollients* is generally employed to designate remedies which are applied externally to soften and relax external surfaces, and, by contiguous sympathy, the deeper seated parts; these effects have been referred by some to a physical, and by others to a vital, agency. They consist principally of bland watery mixtures, or of simple water, at a somewhat elevated temperature, of oleaginous substances, or those combined in various forms, as fomentations, poultices, etc., which will be more particularly noticed in a subsequent part of the work.

Demulcents are bland substances of various kinds, administered internally, to prevent the action of irritating matters on mucous membranes, or to soothe or lubricate these parts when irritated or inflamed. They are useful in irritation and inflammation of the stomach and bowels, in like conditions of the air-passages and lungs, as well as in affections of the urinary apparatus. When prescribed in cases of catarrh, and other morbid conditions of the respiratory organs, they are usually directed to be taken *ad libitum;* but they should be swallowed slowly, for their main efficacy arises from their lubricating effect on the parts with which they come in contact; and this soothing influence is extended by sympathy to the bronchial membranes and pulmonic structure. They should be taken after a fit of coughing, for, as, by that spasmodic effort, the acrid secretion of the inflamed mucous

surface is thrown off, they are enabled to come in direct contact with the irritated part, and thus exercise their soothing influence more efficiently.

Diaphoretics are those medicinal agents which promote and increase cutaneous transpiration. These articles are numerous, and of a very heterogeneous character. In general, warm diluents, aided by external heat, are very effectual means of promoting perspiration; whilst, in some cases, this excretion is better promoted by the use of cool liquids, or even by the sudden and temporary application of cold to the surface. They are in almost every case relative agents; and, to produce the desired effect, should be given in certain states of the system, and with certain precautions. Thus, during the exhibition of these remedies, the patient should be confined to bed, and covered with light blankets; his shirt should be of flannel or muslin, as these are good non-conductors of heat. Their action is much promoted by the free use of diluents, given either warm or cold, according to the temperature of the patient's skin. During the continuance of the perspiration, great care should be taken that it is not suddenly checked from any cause. When it is wished to moderate the sweating, the patient may be removed to another bed, covered with a warm blanket, his clothes changed, and his body dried with dry towels, care being taken that he is not exposed to cold air. During the exhibition of diaphoretics, no medicines of a purgative or diuretic character should be administered, as the action of the latter is incompatible with that of the former, besides causing a frequent exposure to cold during their operation.

Diluents are watery fluids which increase the fluidity of the blood, and render the secretions and excretions less acrid or viscid. The best diluent is water, which is to be given either alone or variously flavored, according to the taste of the patient or the circumstances of the case. The temperature at which a diluent is given has much influence on its action. Thus, water at 60° or 70° F. merely dilutes; whilst at 45° to 60° it acts somewhat as a tonic, and at 70°, and to as high a temperature as it can be drunk, it is stimulant. Merely tepid water will often act as an emetic, whilst at 90° or 100° it will quiet the stomach and relieve nausea. In a cool or cold state, diluents diminish the temperature of the body and moderate an undue excitement of the pulse, and are hence called *refrigerants* or *temperants*, and principally consist of aqueous solutions of many of the acids, or of some of the neutral salts.

Diuretics are medicines which increase or promote the secretion of urine: this they do by increasing the quantity of fluid taken into the stomach, or by stimulating the kidneys to increased action. They are always inconstant in their effects, and cannot be relied upon to produce the desired effect in all cases. To obtain their effect, the surface of the patient's body should be kept cool; otherwise, they are apt to operate as diaphoretics. Hence, the patient should remain out of bed, and the medicine be administered during the daytime; or, if confined to bed, the clothing should be as light as is compatible with comfort. The action of diuretics is much aided by a free use of the cooling diluents.

Emetics are those medicines which invert the natural action of the stomach, so as to cause an ejection of its contents through the mouth, or vomiting. When the patient is plethoric, bloodletting should always precede the administration of an emetic, as it not only promotes its operation, but prevents any injurious rush of blood to the head. When it is required, a full dose of the emetic substance is to be administered; but, in the generality of cases, it is better to give it in divided doses, frequently repeated, until the desired effect is produced. It often happens, when a physician orders an emetic, that he will be asked not to give a strong one, as the patient is too weak, etc.; but it should be known that, unless the medicine causes full vomiting, it will

create more uneasiness and debility than when it acts in the desired manner. When vomiting takes place, it should be encouraged by draughts of tepid water or weak chamomile tea, to be repeated after each discharge; but the use of these fluids is not to be carried too far, because, when the stomach is gorged with liquids, the action of vomiting is often not fully performed, or is wholly checked. When the operation of an emetic is too violent, the best means of checking it is by the administration of laudanum, or the application of fomentations or warm poultices to the epigastrium; if these fail, a spice plaster or a sinapism to the same part will generally be found effectual. If the stomach continues irritable, drink, food, or medicine is to be given in very small quantities. There is always much thirst, which patients are very apt to endeavor to alleviate by freely taking some fluid; but this in most cases being rejected, the evil is only increased; the best plan to relieve it is to frequently wash the mouth with some cool drink, swallowing as little as possible. When the stomach is inactive, and a full dose of an emetic substance does not cause vomiting, it is always unsafe to repeat the dose, as by such a course inflammation may be produced. When the stomach thus resists the action of one article, carried to a due extent, it is better to have recourse to another, or to endeavor to produce emesis by titillating the fauces and throat by means of a feather. Emetics should always be given at the time ordered by the physician, and, as a general rule, on an empty stomach, in the morning; but it is sometimes of benefit to administer them in the evening, as, from the exhaustion produced by their operation, a disposition to sleep is caused.

Emmenagogues are medicines which excite or promote the catamenial discharge; but there are, strictly speaking, few remedies which have this specific power on the uterus, the majority of them acting by their influence on the system generally, or on parts contiguous to the uterus—ergot being almost the only article which exercises a direct power on this organ, and that rather in increasing its expulsive energy than in promoting the menstrual function, though it has been advantageously employed for the latter purpose. To insure the successful administration of this class of remedial agents, the system must be previously prepared for their use by invigorating it, if there are relaxation and debility; and by an opposite course, if there is an undue degree of arterial action. In a majority of cases, the restoration of the discharge is rather attributable to a proper regulation of the system than to any specific power in the emmenagogue administered.

Epispastics are external applications which are capable of inflaming the skin, and causing an effusion of serum beneath the cuticle. These effects can be produced by a variety of means; but that most generally employed is the Spanish fly, or cantharides. The mode of applying a blister, and of dressing the sore it occasions, is very simple; but, without special directions from the physician, many nurses and attendants on the sick are strangely ignorant on the subject. The best preparation of cantharides for blistering purposes is the cerate of Spanish flies, or common blistering plaster, this will always be found effectual, if properly prepared and of good materials. It is best spread on soft leather, though linen, muslin, or even stout paper will answer. To obtain a prompt action from a blister, it should be spread thick; powdered flies should not be sprinkled on its surface, for, if the plaster is well made it requires no such addition; added to which, the powder is apt to adhere to the skin and to give the patient much uneasiness. Before applying a blister, the part on which it is to be placed should be well washed with soap and water, and thoroughly dried, the hair shaved off, and the skin irritated by being rubbed with a coarse towel, or, if this is not sufficient, with warm vinegar, spirits of turpentine, etc. The plaster is to be secured to the part by means of a bandage; or, what is better, by means of strips of adhesive

plaster, or by coating the margin of the leather or cloth on which the blister is spread with the adhesive plaster. Whenever either of the last modes of securing a blister is resorted to, it is necessary, to secure its adhesion, that the skin be perfectly dry. The plaster should be in perfect contact with the skin; but should not, as is too often the case, be subjected to much pressure, for this retards vesication, and is a source of uneasiness to the patient.

The period generally required for a blister to draw is twelve hours; but this is liable to many exceptions: thus, for children, delicate females, and for persons with tender skins, a much shorter time is sufficient. The best plan, when the patient complains of pain and burning, is to lift the corner of the plaster and examine the condition of the skin beneath, and, if it be found vesicated or fully reddened, to remove the blister; or, if the skin is not sufficiently inflamed, to permit the blister to remain till this result is attained. When the skin is sufficiently reddened, but not vesicated, the application of a warm poultice, or of a dressing of basilicon ointment, will cause a copious effusion of serum. In cases of children and irritable persons, or those liable to strangury, this should always be done. To guard against this latter, it has been advised to interpose a piece of gauze, fine muslin, or tissue paper between the skin and the plaster: these should be moistened with oil. It is very doubtful, however, whether this plan is of any real advantage.

In many persons, the action of a blister disposes to sleep; but in very sensitive individuals it causes much irritation; this may be often obviated by the addition of a few grains of extract of hyoscyamus, or of belladonna, to the plaster. When it is requisite to cause a blister as rapidly as possible, the plaster of Spanish flies must be replaced by other means. In such cases paper moistened with oil of cantharides, or with the ethereal extract, will be found useful. The application of a pledget, wet with water of ammonia, will also act very rapidly. When a still more rapid effect is desired, the direct application of heat to the part may be resorted to, by means of a disk of polished metal, heated in boiling water, or by applying a piece of wet blotting paper to the skin, and passing a hot flatiron over it.

Some persons have a great dread of blisters, and object to the application of a large one; but, when the full effect of blistering is required, a large one should always be applied, for the pain and irritation caused by a large blister are very little greater than a small one occasions, whilst the benefit is more decided. Still, as the quantity of the discharge is in a great measure equivalent to the size of the vesication, large blisters depress more than small ones; therefore, when they are intended merely as counter-irritants, small blisters are to be preferred. The size and shape of blisters vary greatly, according to the part to which they are to be applied, and the age of the patient. Dr. Dewees gives the following as the general size of blisters:—

For the legs or thighs, from 7 to 8 inches long by 3 to $3\frac{1}{2}$ broad.

For the back, from 7 to 8 inches long by 4 to $4\frac{1}{2}$ broad.

For the thorax, from 8 to 9 inches long by 7 to 8 broad.

For the stomach, from 8 to 9 inches long by 6 to 7 broad.

For the abdomen, from 10 to 11 inches long by 8 to 10 broad, if designed to cover the whole surface.

For the ears, from the peculiarity of the shape, the size cannot well be defined.

For the temples, from an inch to an inch and a half in diameter; they are usually circular.

These are the sizes for adults; for younger persons they must, of course, be proportionably smaller.

The dressing of a blister requires some skill on the part of a nurse; and much pain and inconvenience will be saved to the patient by the exercise of

a little dexterity in the operation. Some trouble will be avoided by having everything necessary for the operation in readiness, as the plasters spread, bandages ready, etc. Each of the vesicles is to be carefully snipped, with the points of a pair of sharp scissors, at their most depending part, and the serum evacuated; but when the vesications are very small and numerous, this should not be attempted, as it would occasion unnecessary fatigue to the patient. In such case, the larger vesicles only are to be opened, and the smaller left till a subsequent dressing, when it is probable they will be found much increased in size. The cuticle should not be removed from the surface of the blistered part, except when it is wished to keep up a continued discharge, in which case the cuticle is best removed by the application of a hot poultice. When it is wished to heal the blistered surface, the dressing should be of simple cerate thinly spread on a linen rag and renewed twice a day. When the object is to maintain the discharge for a short time, the dressing should consist of basilicon ointment. When a more permanent impression is desired, some more stimulating application, as savin ointment, must be used. A blistered surface should seldom be washed, as this often causes chilliness and fatigue, and is generally useless. Some persons become faint when a blister is dressed for the first time: this should not excite alarm, as it is a mere sympathetic effect. The plaster for the dressings should not be larger than the blistered surface, as it causes irritation of the sound skin without aiding the discharge. Blisters sometimes, instead of healing properly, become painful and inflamed, and assume the appearance of an eroding or a phagedenic sore; this is best remedied by the application of a soft bread and milk poultice, having its surface anointed with fresh lard or cold cream. If this does not succeed, a lotion of lime-water and linseed oil will often be found effectual; oxide of zinc ointment will likewise prove useful in some cases. When a blistered surface causes much itching and renders the patient restless, washing the irritated surface with an infusion of flaxseed or slippery elm will, in most cases, relieve the uneasiness. One of the most distressing consequences arising from the application of a blister, is the production of strangury, which invariably takes place in some persons whenever a blister is used; this is remedied by a free exhibition of emollient and mucilaginous diluents, opiates by the mouth and as an enema, external fomentations to the pubic region, etc.; in some cases, a clyster of solution of sulphate of sodium will act very efficaciously. To prevent its occurrence, it has been found of benefit to incorporate camphor and opium with the epispastic ointment, say twelve grains of the former and four of the latter, for a blister six inches square. It is said that boiling the flies in water, previous to their formation into an ointment, will deprive them of the property of causing strangury.

Errhines are medicines which, snuffed up the nostrils, cause an increased discharge of the nasal mucus, and generally the convulsive action of sneezing. They are now seldom prescribed, though undoubtedly useful in some cases; but they should never be employed in persons disposed to apoplexy, or in those affected with hernia, prolapsus uteri, etc.

Escharotics are topical agents, which, by a chemical or mechanical action, are capable of eroding or disorganizing the solid tissues of the part to which they are applied; those which act mechanically are actual cauteries, as a heated iron, moxa, etc.; those which act chemically are caustics, as fused potassa, nitrate of silver, and chloride of zinc. In cauterizing with a heated iron, this should be at a white heat, as, at this temperature, it occasions less pain to the patient, from its causing an immediate death of the part to which it is applied. In applying it to any part, the surface should be protected by some non-conductor of heat, but not by wet paper or cloth, as the sudden extrication of steam will produce a blistered surface around the burn, and

will much increase the pain. The hot iron is rarely employed in this country, except to arrest hemorrhage; in leech bites, where the usual means of stopping the bleeding are ineffectual, the application of the end of a heated wire to the wound will, in most cases, be found effectual. Another mode of applying the actual cautery is by means of moxa. This term is used for a small cone or cylinder of some slowly burning substance, applied to the skin, set fire to, and suffered to burn slowly for a length of time proportionate to the effect intended to be produced; this is a very painful operation, and seldom employed in the United States. The chemical cauterants are numerous, and of various degrees of activity. In using the most powerful of them, caustic potassa, some precautions are necessary, owing to its great deliquescence; when it is employed to form an issue, layers of adhesive plaster should be placed on the skin, with a hole of the proper size cut in their centre, through which the caustic can be applied without danger of its spreading. The chloride of zinc, which is an excellent cauterant, is generally employed by forming it into a paste with flour. The chloride of antimony, though very powerful, from being a fluid, is difficult to manage, but has been advantageously used in cases of poisoned wounds.

Expectorants are medicines which promote the expulsion of mucus or other matters from the air-passages. It is an ill-defined class of remedies, and is extremely uncertain in its action; but we cannot, in this place, examine the propriety of retaining a division of the materia medica, the articles composing which act in an obscure and by no means regular manner, and in almost all cases by a remote or secondary influence of a nauseating or sedative character. At the same time, daily experience proves that much benefit is derived, in diseases of the respiratory organs, from the administration of substances which are usually considered expectorants, in whatever way they may primarily act on the system. No class of remedies has been more productive of injury than that of so-called cough medicines; nor in any one has quackery exercised a more unbounded sway. It is too common for persons to resort to their use in cough and catarrh without consulting a physician, thus often aggravating a trifling irritation until it becomes a serious, and oftentimes a fatal, inflammation; for, as many of the articles composing them, especially those most frequently employed in domestic and empirical practice, are stimulants, much mischief is apt to follow their indiscriminate use. The following rules should be observed in the exhibition of expectorants—and should always be enforced on the patient. The surface of the body should be kept moderately warm, so as to promote a gentle diaphoresis, and nothing done that may interfere with the primary operation of the remedy on the nervous, lymphatic, or muscular systems, by the secondary effect of which the lungs are benefited; hence, the use of any that excite diuresis, and more especially of purging, should be avoided; nor should the patient be allowed to indulge his appetite in food or drinks of a stimulating character.

Narcotics are medicines which lessen the manifestation of vital phenomena dependent upon the nervous system, especially deadening sensibility and diminishing the motor power: their full operations produce sleep, or even coma. The objects most generally in view in the administration of these articles are the production of sleep, or the alleviation of pain. No medicines are so much modified in their action by idiosyncrasy and habit. This does not extend to them as a class, but to each individually; hence, it is of importance that a physician should ascertain from a patient, before prescribing a narcotic, whether he has been long or frequently in the habit of using it, or whether it causes any unpleasant effects upon him, so that some other article of the class may be substituted. As regards the time at which a narcotic should be given, it depends upon the cause for which it is to be administered. Thus, if prescribed to allay pain, it may be given at any time,

and repeated as long as the pain remains; if to procure sleep, it is best given at night, and so late as to prevent the patient from being disturbed before it produces its full effect; otherwise, it is apt to exercise a stimulating action. In many persons, the secondary effect of opium is to cause much nausea and headache after its narcotic action has ceased, which are best relieved by a cup of strong coffee, or by vegetable acids. When, however, this or any other narcotic produces these consequences, its use should be relinquished, and some other substituted.

Refrigerants are remedies which are supposed to diminish the heat of the body without causing a marked diminution of sensibility or nervous energy, and they are thought to do this, whether administered internally or applied externally; but it is very doubtful whether any medicines act as internal refrigerants independently of the coldness of the medium in which they are administered, except in a secondary manner. Diaphoretics act as refrigerants by inducing an increase of superficial evaporation; sedatives, by lessening the force and rapidity of the circulation; purgatives, and especially the saline, by the copious watery evacuations they produce. The great refrigerant is cold water, whether applied topically or given internally. As a topical application, it is often mixed with fluids of greater volatility, that, by a more rapid evaporation, a proportionate abstraction of heat may take place.

Sedatives are those remedial agents which diminish muscular tonicity, and the manifestation of nervous influence, even to the production of syncope, or a suspension, for a certain time, of the functions of the systems affected. Some act generally; others more locally. Bloodletting and tartar emetic are examples of the first; hydrocyanic acid, of the second. Most of the articles of this class are capable, if given in too large doses, or too long continued, of producing a depression of the vital powers which may induce death; and hence require to be administered with much care and judgment.

Sialagogues are medicines which induce an increased secretion from the salivary glands. The modes in which the articles composing this class act are various. Some are merely local irritants, as pellitory, horseradish, etc.; and, when chewed, produce such a local stimulation of the salivary glands as to produce a copious effusion of saliva and mucus. Another and more important section includes such articles as evince their sialagogue powers in a secondary manner, which does not take place until a powerful impression has been made on the system generally; to this belong mercury, gold, etc., and their preparations. In the first of these divisions, their medicinal powers depend wholly on sialagogue effects; hence, they are merely useful as counter-irritants; the local stimulation, and consequent increased secretion produced by their action, often acting advantageously in relieving inflammations and congestions of adjoining parts. The curative value of internal sialagogues, however, is not dependent on the salivary flow they occasion, for though, in many cases, this may be very great, yet it is not essential to their remedial action, and may, in fact, rather be considered as a proof that their full constitutional influence has been attained.

In administering mercury with a view to the production of its constitutional effect, it should always be recollected that, if it be permitted to exert its sialagogue powers to any great extent, it always causes great distress to the patient, without producing a beneficial effect on the disease; and its operation should, therefore, be closely watched. The condition of the gums should be examined daily, and, as soon as they display evidence of the action of the remedy, it should be discontinued, or given at longer intervals. The constitution of the patient should be sedulously attended to, as mercurials are apt to produce unpleasant consequences in delicate, nervous individuals, and are badly borne by the aged, who have suffered from previous attacks of

illness. It is always dangerous to push them to salivation in children, as it frequently produces sloughing of the gums and cheeks. When too great a degree of salivation has been induced by the mercurials, it is of importance to check it as speedily as possible. This is to be attempted by cool air, and by washing the mouth with an infusion of some vegetable astringent, a solution of opium, or one of acetate of lead; this latter is very efficacious, but has the property of rendering the teeth black. Marked benefit has also been derived from a weak solution of chloride of soda; much reliance is placed by some practitioners on the preparations of sulphur, especially the soluble sulphurets, both as a wash in solution, and administered as a powder. An infusion of the smooth sumach (*Rhus glabra*), as well as a strong solution of borax, has likewise been found very useful as a local application. When the inflammation is severe, the administration of cathartics, especially the saline, is requisite, and in some cases blisters and leeches. Where a tendency to slough exists, the application of diluted pyroligneous acid will be found advantageous.

Stimulants are remedies which increase the vital activity of the system, or of a single organ, the first being termed *general*, and the latter *local* stimulants. Much discrimination and caution are required in the administration of articles of this class, because, if given when inflammation is present, they are liable to create more mischief than benefit; but they are called for when, on the decline of that condition of an organ, or organs, a state of relaxation or torpidity exists. In this state of things, a gentle stimulation materially assists the functions, and is productive of much benefit.

Tonics are closely allied to stimulants, and some of them act in this manner; but most of them do not cause any sensible excitation of the system, whilst, at the same time, they gradually impart tone and activity to the vital powers. With the exception of iron, most tonics act primarily on the nervous system, and secondarily on the muscular, on which latter their power is most distinctly marked. Iron appears to act in a different manner, by altering or improving the condition of the blood, and consequently increasing the tone of the system. One of the most valuable properties of many articles of this class is that of curing diseases of a periodic type; in what manner, it is difficult to explain, as the laws that govern periodicity are but little understood.

In prescribing the antiperiodic tonics in fevers, as cinchona and its salts, their use should be confined to the intermissions, and, in most cases, in as large doses as the stomach will bear with impunity, so timing the doses that one may be taken a short time before the expected paroxysm. Quinia and its preparations, although eminently antiperiodic, are not possessed of the tonic properties of the bark itself, and, in the large doses recommended of late, are apt to induce unpleasant affections of the head, as vertigo, ringing in the ears, headache, and mental delusions. In administering arsenic as an antiperiodic, its effects should be carefully watched, and be discontinued when it causes constitutional symptoms, as vertigo, and œdema; nor should it be given in debilitated habits, and where the pulse is weak and feeble. It is better, in all cases, to commence its use in small doses, and to increase them until the stomach is somewhat affected, when the quantity is to be diminished, or even discontinued.

Management of Convalescence and Relapses.

The management of a patient, after the cessation of an attack of disease, and when he is declared convalescent, is of equal importance with the treatment during the continuance of the malady; and yet it is one strangely neglected by the physician, and is too often trusted to nurses and friends.

In all recoveries from sickness, the organs or parts which have been affected remain for some time in an excitable condition, and liable to recurrence of the disease on the slightest provocation; and it is of much consequence to inquire what causes operate most frequently in thus producing a relapse. It will be found that they generally consist in the indulgence in food, either in too great quantity, or of an improper character, or in the too early or imprudent exposure to the weather, or in over-exertion of any kind.

Diet.—The stomach, in common with every other part of the body, suffers from a diminution of its normal vigor and power of digestion, and, as a necessary consequence, when food of too nutritious a character is taken into it, it is unable to digest it properly; hence, part of it remains in an undigested state, oppressing the weakened organ, and is either rejected by vomiting, or causes diarrhœa; or, if the stomach is capable of converting it into nourishment, an undue stimulation of that organ ensues, which will result in fever. This latter state of things is also induced by the administration of stimulating drinks. No animal substance, in any form, should be allowed during the continuance of acute febrile disease, nor immediately after its cessation. When it is permitted, it should be at first as little stimulating as possible, and in small quantities at a time; but it is to be gradually increased in quantity and quality as the patient gains strength. An invalid should be very cautious in the use of certain articles, considered by nurses and others as peculiarly nourishing and proper for the sick, namely, animal jellies of all kinds. These are exceedingly indigestible, even in a state of perfect health—added to which, they are, in most cases, rendered highly stimulating by the addition of wine or spices.

Exercise.—Another frequent cause of a relapse is over-exertion, from the common, but erroneous, notion that a convalescent will not recover his strength, except he takes as much exercise as he can bear. Properly regulated exertion is highly serviceable; but it should never be carried so far as to produce exhaustion, and should be pursued for some time in-doors, before it be attempted in the open air; the latter, at first, should always take place in a carriage, that can be opened or closed at will; the patient may then attempt short walks in the open air; but, in all cases, it is of importance that he is not unduly fatigued, as otherwise injury instead of benefit will be the result. One of the most serious errors, committed with regard to exertion, is that of permitting a convalescent to sit up too frequently, or for too long a time, under the mistaken notion of giving him strength. A patient should never be allowed to sit up longer than is agreeable to his feelings, and never so long as to produce a sense of fatigue.

Air.—Great care must be taken that an invalid is not exposed to cold or damp air, especially if his skin be disposed to moisture; to guard him from sudden changes of temperature, he should wear flannel next to his skin, and have his feet well protected by warm stockings. In every convalescence, from whatever disease, country air is far more invigorating than the vitiated atmosphere of towns; but care must be exercised in the selection of the location, as to its freedom from malaria, etc., for it is far preferable that he should remain within the precincts of the city, than expose himself to the influence of causes which act with peculiar activity on a system debilitated by previous disease.

FORMULARY.

ABSINTHIUM.

Wormwood.

This name is applied to several species of *Artemisia*, all, however, possessing the same properties. That recognized in the U. S. Pharmacopœia, and most generally employed, is *A. absinthium*, a native of Europe, and commonly cultivated in our gardens.

Sex. Syst. Syngen. super. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1188. Griffith, Med. Bot. 405.

The parts used are the leaves and the tops or extremities of the branches. These have a grayish-white color; a soft, silky feel; a fragrant odor, and a very bitter taste. They impart their properties to water or alcohol.

Wormwood has been employed as a stimulating tonic, in various forms of dyspepsia, in amenorrhœa, chronic leucorrhœa, gout, verminose affections, etc. It is given in a variety of forms.

Infusion of Wormwood.

℞. Wormwood, one ounce.
Boiling water, one pint.

Infuse. Dose, one to two fl. ounces.
Brande.

The tisane of wormwood of the *Paris Codex* is a weak infusion, made in the proportion of 1 of wormwood to 200 of boiling water.

Extract of Wormwood.

℞. Wormwood, two parts.
Alcohol,
Water, each, six parts.

Digest for 24 hours, express and treat the residue again with a mixture of

Alcohol,
Water, each, three parts.

Mix the expressed liquids, filter, and evaporate to the proper consistence. Dose, ten to twenty grains. Tonic and stomachic.
Ph. Germ.

Clyster of Wormwood.

℞. Wormwood, Rue, Savin, each, three drachms.
Boiling water, one pint.

Boil, strain, and add to each half pint

Castor oil, half an ounce.
Foy.

Tincture of Wormwood.

℞. Wormwood, one part.
Alcohol, sp. gr. 914, sufficient.

Obtain by displacement, five parts of tincture. Tonic, stomachic, and vermifuge. Dose, from twenty drops to two fl. drachms.
Paris Codex.

The tincture of *Ph. Germ.* is of the same strength.

Alkaline Tincture of Wormwood.

℞. Wormwood, Tansy, Centaury, Bog Bean, each, eight parts.
Alcohol, one hundred and twenty parts.
Carbonate of potassium, one part.

Digest for six days, and filter. Dose, one or two fl. drachms. In dyspepsia and flatulent colic.
Hoffmann.

Syrup of Wormwood.

℞. Wormwood, two ounces.
Boiling water, twenty fl. ounces.

Infuse for six hours, strain, add for every ten ounces of the filtered liquor, nineteen ounces of sugar, and make a syrup. Dose, a tablespoonful.
Paris Codex.

Wine of Wormwood.

℞ Wormwood, three parts.
Alcohol, 60 per ct., six parts.
Good white wine, one hundred parts.

Digest the wormwood in the alcohol for 24 hours; then add the wine, macerate for ten days, express, and filter. Dose, one to two tablespoonfuls. *Paris Codex.*

Oil of Wormwood.

℞ Tops of wormwood, one part.
Olive oil, ten parts.

Heat for two hours on a water-bath, stirring often, express, and filter. As an embrocation to the abdomen, in cardialgia, diarrhœa, etc. *Paris Codex.*

Essential Oil of Wormwood.

℞ Tops of wormwood, at will.
Water, sufficient.

Distil, and collect the oil that floats on the product. Dose, two to four drops several times a day. *Paris Codex.*

Compound Spirit of Wormwood.

℞ Wormwood, four pounds.
Juniper, eight ounces.
Cinnamon, two ounces.
Angelica root, half an ounce.
Alcohol, 34 per ct., seventeen pounds.

Macerate for fourteen days, distil twelve pounds, pour back and re-distil ten pounds. *Guibourt.*

Ratafia of Wormwood.

℞ White sugar,
Water, each, forty ounces.
Dissolve, and add
Orange-flower water, six fl. ounces,
previously beaten with
White of egg, one.
Then add
Compound spirit of wormwood, fifty-six fl. ounces.

Heat on a water-bath, cool, and filter. *Guibourt.*

ACACIA.

Gum Arabic.

This gum is derived from several species of *Acacia*, as *A. vera*, *A. senegal*, *A. arabica*, etc.

Sex. Syst. Polygam. monœcia. *Nat. Syst.* Fabaceæ.

Willdenow, Sp. Pl. iv. 1056. Griffith, Med. Bot. 270.

In tears or fragments of various sizes, often rounded; colorless or of a yellowish tint, semi-transparent, inodorous, of a slightly sweetish mucilaginous taste. Wholly soluble in water, forming a mucilage. Insoluble in alcohol. Demulcent and nutritive.

Compound Powder of Gum Arabic.

℞ Powdered gum Arabic, three parts.
Powdered liquorice root, two parts.
Powdered sugar, one part.

Mix. Demulcent and mild expectorant. Used as a vehicle for heavy insoluble powders. *Ph. Germ.*

Mucilage of Gum Arabic.

℞ Gum Arabic, in small fragments, four ounces.
Water, half a pint.

Add the water to the gum, agitate occasionally till the mucilage is formed. Strain. *U. S. Ph.* and *Ph. Germ.*

Brit. Ph. dissolves two parts of gum Arabic, in pieces, in three parts of water. *Paris Codex* directs equal weights of powdered gum and water.

Principally used to suspend insoluble powders, or to diffuse oily and resinous substances through aqueous fluids.

Mixture of Gum Arabic.

℞ Powdered gum Arabic,
Powdered sugar, each, three parts.
Water, thirty-two parts.

Dissolve. Demulcent and emollient. Used to appease cough and to allay irritation, also as a vehicle for other medicines. *Ph. Germ.*

Gum Lozenges.

℞ Powdered gum Arabic, one ounce.
Powdered sugar, nine ounces.
Orange-flower water, six drachms.

Mix and form into lozenges weighing fifteen grains each. A useful article to allay irritation of the throat in catarrh. *Paris Codex.*

Pectoral Paste of Gum Arabic.

℞ Gum Arabic, two pounds.
Dissolve in water, and add
Sugar, one pound and a half.

Evaporate to a proper consistence, adding

Orange-flower water,	three fl. drachms.

Employed to allay irritation, like the last. *Foy.*

Pate de Guimauve.

R. Gum Arabic, white,	two pounds.
White sugar,	two pounds.
Whites of eggs,	twelve.
Double orange-flower water,	four fl. ounces.

Dissolve the gum in two pounds of water, strain, heat by a water-bath, add the sugar, and evaporate, continually stirring, to the consistence of honey; then add the whites of eggs previously beaten, and the orange-flower water, and continue to beat the mixture until it does not adhere when applied to the back of the hand; pour on a marble slab and keep in boxes, covered with a mixture of three parts of starch and one of sugar. *Paris Codex.*

Gum Arabic Paste.

R. Gum Arabic,	one pound.
Dissolve on a water-bath, in water,	eight fl. ounces.

Evaporate to the consistence of honey.

Add

Whites of eggs,	six.
Orange-flower water,	two ounces.

Beat well together. When sufficiently consistent, run into moulds.

Used to appease cough and allay irritation. *Béral.*

Syrup of Gum Arabic.

R. Gum Arabic, in pieces,	two ounces.
Sugar,	fourteen ounces.
Water,	eight fl. ounces.

Dissolve the gum in the water without heat, then the sugar with a gentle heat, and strain. A good addition to pectoral and other mixtures. *U. S. Ph.*

Ph. Germ. directs this to be prepared by mixing one part of the mucilage with three parts of simple syrup.

Compound Syrup of Gum Arabic.

R. Syrup of gum Arabic,	four fl. ozs.
Sulphate of morphia,	one grain.
Oil of sassafras,	one drop.
Hoffman's anodyne,	half fl. drm.

Mix. Known as Jackson's cough syrup, and much used in catarrhs, etc. Dose, a tablespoonful every three hours. *Jackson.*

Linctus of Gum Arabic.

R. Gum Arabic,	one part.
Clarified honey,	three parts.

Incorporate the gum with the honey. The dose is a teaspoonful occasionally, to relieve irritation of the throat in catarrh. *Béral.*

Wendt's Mixture of Gum Arabic.

R. Mucilage gum Arabic,
Linden-flower water, equal parts.

Found useful in doses of a teaspoonful every hour in the diarrhœa of infants. *Radius.*

ACETOSELLA.

Wood Sorrel.

Sex. Syst. Decand. Pentag. *Nat. Syst.* Oxalidaceæ. Lindley.

Oxalis acetosella. Linn. Torrey and Gray, Fl. i. 211. Griffith, Med. Bot. 208.

A native of Europe and the United States. The whole plant is used. It is agreeably acid, from its containing a binoxalate of potassium. It is refreshing and cooling, and is said to be useful in scorbutic affections.

The fresh herb is used in doses of one drachm, the aqueous extract, now rarely made, in doses of a scruple to half a drachm.

ACETUM.

Vinegar.

Impure and very dilute acetic acid, containing about five per cent. of real acid. It is the result of acetous fermentation of any fluid which is susceptible of vinous fermentation. It is principally obtained in Europe from malt or weak wine, and in this country from cider. It should be distilled for pharmaceutical use.

It is employed internally as a refrigerant and diuretic, and is a grateful addition to diluent drinks in febrile affections. It is also sometimes used as a clyster. Externally it is beneficial as a fomentation, and likewise forms a useful addition to gargles and collyria. *U. S. Dis.*

Vinegar Mixture.

R. Vinegar,	three fl. ounces.
Honey,	two fl. ounces.
Water,	three pints.

Mix. As a cooling drink in fevers. *Ammon.*

R. Vinegar,	one fl. ounce.
Acetic ether,	one fl. drachm.
Syrup of raspberries,	three fl. ozs.
Water,	two pints.

Mix. As a refreshing drink in fevers. *Augustin.*

Mixture of Vinegar and Cardamom.

℞. Vinegar, one fl. drachm.
Comp. tincture of cardamom,
Simple syrup, each, half a fl. oz.
Water, ten fl. ounces.

Mix. To be taken in such portions as the stomach can bear. In sick headache.

Vinegar Wash.

℞. Wine vinegar,
Alcohol, each, one ounce.
Water, twelve ounces.

Mix. As a diaphoretic wash in fevers, and diluted with water as an application to contusions. *Berends.*

Gargle of Vinegar.

℞. Vinegar, two parts.
Honey,
Barley water, each, eight parts.

Mix. As a mouth-wash or gargle in inflamed fauces. *Soubeiran.*

℞. Vinegar, two fl. drachms.
Chloride of ammonium, one drachm.
Honey, one and a half fl. ounces.
Water, twelve fl. ounces.

Mix. As a gargle in inflamed fauces. *Ratier.*

Syrup of Vinegar.

℞. Vinegar, twenty ounces.
Sugar, thirty-five ounces.

Dissolve by a gentle heat. *Par. Cod.*

Mixed with water, this forms a pleasant and refreshing drink in febrile complaints. Dose, half to one fluidounce.

Vinegar Cataplasm.

℞. Vinegar, one part.
Flour, three parts.

Make cataplasm. An astringent and antiseptic application. *Béral.*

Distilled Vinegar.

Distil a gallon of vinegar by means of a sand-bath, from a glass retort into a glass receiver. Discontinue the process when seven pints shall have been distilled, and keep these for use. *U. S. Ph.*

ACHILLEA.

YARROW. MILFOIL.

A. millefolium is indigenous to Europe, but has been naturalized in this country. It is an herbaceous plant two to three feet high.

Sex. Syst. Syngen. Polyg. superfl. *Nat. Syst.* Compositæ.

The parts employed are the leaves and flowering tops. The leaves are finely divided, with linear segments; the flowers are in numerous heads, with whitish ray and disk florets. They have a peculiar aromatic odor reminding of chamomile, and an aromatic bitter, slightly astringent, taste. They are stimulating, tonic, and somewhat astringent. Dose, half to one ounce a day in the form of infusion.

Extract of Yarrow.

℞. Yarrow leaves,
Yarrow flowers, each, equal parts.

Exhaust with diluted alcohol and evaporate to the proper consistence. *Ph. Germ.*

Dose, ten to thirty grains, in pills or mixtures.

Mixture of Yarrow.

℞. Extract of yarrow, one drachm.
Borax, one scruple.
Chamomile water, six ounces.

Dissolve. Two tablespoonfuls every two hours, in amenorrhœa. *Hildenbrand.*

ACIDUM ACETICUM.

ACETIC ACID.

This acid is obtained from wood by destructive distillation and subsequent purification. It is a colorless liquid having a pungent odor free from empyreuma.

Sp. gr. 1.047, *U. S. Ph.*; 1.044, *Brit. Ph.*, 1.040, *Ph. Germ.*

Glacial Acetic Acid.

(*Sp. gr.* 1.065.)

It is obtained by distillation from an anhydrous acetate and sulphuric acid; or from a mixture of an anhydrous acetate and bisulphate of potassium. At a mean temperature it is liquid, but it crystallizes at about 34° and remains crystalline until the temperature rises to 48°. Its specific gravity is increased by adding ten per cent. of water.

Diluted Acetic Acid.

(*Sp. gr.* 1.006.)

℞. Acetic acid, a pint.
Distilled water, seven pints.

Mix. *Brit. Ph.* and *U. S. Ph.*

This is the *pure vinegar* of *Ph. Germ.*, which has the sp. gr. 1.008.

Camphorated Acetic Acid.

℞ Powdered camphor, half an ounce.
Acetic acid, six and a half fluidounces.

Dissolve. *Ed. Pharm.* 1841.

Aromatic Spirit of Vinegar (Aromatic Acetic Acid, or Aromatic Vinegar).

℞ Glacial acetic acid, twenty troyounces.
Camphor, two troyounces.
Oil of lavender, eight minims.
Oil of cinnamon, fifteen minims.
Oil of cloves, half a drachm.

Mix. To be kept in a glass-stoppered bottle. *Paris Codex.*

℞ Glacial acetic acid, twenty-five parts.
Oil of cloves, nine parts.
Oil of lavender,
Oil of lemon, each, six parts.
Oil of bergamot,
Oil of thyme, each, three parts.
Oil of cinnamon, one part.

Dissolve. *Ph. Germ.*

Cooley gives a similar formula, with the addition of one and a half parts of camphor.

Aromatic vinegar is used as a pungent and reviving perfume in fainting, etc. As it is corrosive, it should not be allowed to come in contact with the skin or clothes. It is also prepared in the dry way, as follows:—

℞ Crystallized acetate of sodium, one drachm.
Sulphuric acid, twenty drops.
Oil of lemons,
Oil of cloves, each, three drops.

Mix, and keep in a glass-stoppered bottle. *Gray.*

The above substitutes for *Henry's aromatic spirit of vinegar* are very pungent perfumes.

Acetic Acid Cataplasm.

℞ Rye meal, three parts.
Diluted acetic acid, one part.

Mix. Used as an application to ill-conditioned ulcers. *Taddei.*

Acetic Acid Mixture.

℞ Diluted acetic acid, one ounce.
Simple syrup, half an ounce.
Water, four ounces.

Mix. (*See* Vinegar Mixture.) In scarlatina. Dose, for a child nine years old, one to two tablespoonfuls every four hours. *Brown.*

Camphorated Vinegar.

℞ Camphor,
Glacial acetic acid, each, one part.
Vinegar, forty parts.

Powder the camphor with some of the acetic acid, add the remainder, then gradually the vinegar, agitate occasionally for several days, and filter. *Paris Codex.*

℞ Powdered camphor, three parts.
Vinegar, one hundred parts.

Dissolve by agitation. *Raspail.*

Acetic Acid Clyster.

℞ Barley water, six fl. ounces.
Diluted acetic acid, one to three fl. ounces.

Mix. The proportion of diluted acid may be varied according to the indication. Has been advised in obstinate constipation, ileus, etc. *Swediaur.*

Aromatic or Prophylactic Vinegar.

℞ Oil of rosemary, Oil of juniper, Oil of lemon, each, one part.
Oil of thyme, two parts.
Oil of cloves, five parts.
Tincture of cinnamon, one hundred parts.
Aromatic tincture, fifty parts.
Acetic acid, two hundred parts.
Water, one thousand parts.

Mix by agitation, and after three days, filter. *Ph. Germ.*

This is intended as a substitute for the complicated formula formerly used for *Thieves' vinegar*, at one time so celebrated as a preservative against the plague. It has no advantages over it.

Vinegar of the Four Thieves.

℞ Wormwood, Roman wormwood, Rosemary, Sage, Mint, Rue, each, one ounce and a half.

Lavender flowers, two ounces.
Garlic, Calamus, Cinnamon, Cloves, Nutmegs, each, two drachms.
Distilled vinegar, eight pints.

Digest by a moderate heat, in a closely stopped matrass, for twelve days, strain, express, and filter, then add one ounce of camphor dissolved in alcohol. *Lewis.*

ACIDUM ACETICUM EMPYREUMATICUM.

Pyroligneous Acid.

Pyroligneous acid (*sp. gr.* 1.034) is an impure acetic acid, obtained by a destructive distillation of wood. It contains creasote, empyreumatic oil, etc., and has been employed in gangrene to correct the fetor and to promote the separation of sloughs, and also as an application to unhealthy ulcers. *U. S. Dis.* Dunglison, N.R. 6th ed. p. 13.

Mouth Wash.

℞ Pyroligneous acid, half a fl. oz.
Cinnamon water, four fl. ounces.
Syrup of mulberries, two fl. ozs.

Mix. Used as a mouth-wash in cancrum oris. It should be kept in an opaque glass vessel to prevent decomposition. *Phœbus.*

Injection of Pyroligneous Acid.

℞ Pyroligneous acid, two fl. drms.
Distilled water, six fl. ounces.

Mix. In purulent discharges from the ear. *Buchanan.*

Cataplasm of Pyroligneous Acid.

℞ Bran, half a pound.
Linseed meal, one ounce.

Mix well, and add Pyroligneous acid, q. s. to make a cataplasm. As an application to foul ulcers. *Reece.*

ACIDUM ARSENIOSUM.

White Arsenic.

Arsenious acid is found in the shops, in the form of semi-transparent or opaque lumps, or in that of a heavy white powder. It has no smell, and its taste is slightly acrid. It is volatile at a red heat, giving off white fumes of a garlic-like odor. Extremely poisonous and corrosive, even in minute doses. Dose, $\frac{1}{60}$th to $\frac{1}{12}$th of a grain. *U. S. Dis.*

Arsenical Powder.

℞ White arsenic, one part.
Calomel, one hundred and ninety-nine parts.

Mix. Recommended in obstinate cases of lepra and cancerous ulcers. *Dupuytren.*

Compound Powder of White Arsenic.

℞ White arsenic, ten parts.
Powdered dragon's blood, three parts.
Animal charcoal, two parts.
Cinnabar, thirty parts.

Mix, and triturate well. Has been used in the same description of cases. Known as Cosme's arsenical powder. *Ph. Germ.*

℞ White arsenic, one part.
Kino, eight parts.
Cinnabar, sixteen parts.

Mix, and triturate well. *Ratier.*

Employed in the French hospitals as a caustic to cancerous sores.

℞ White arsenic, one part.
Cinnabar, five parts.
Burnt sponge, two parts.

Mix well. *Paris Codex.*

Used as an escharotic; about three times stronger than the preceding, and half the strength of Cosme's powder.

Arsenical Ointment.

℞ White arsenic, one drachm.
Lard,
Spermaceti cerate, each, six drachms.

Melt the cerate and lard by a gentle heat, and add the arsenic; triturate well in a glass mortar till perfectly united. *Soubeiran.*

℞ Cosme's arsenical powder, one part.
Hellmund's narcotico-balsamic ointment, eight parts.

Mix thoroughly. *Ph. Germ.*

Arsenical Cerate.

℞ Powdered white arsenic, one scruple.
Simple cerate, one ounce.

Mix the arsenic with the cerate softened by heat, and triturate well.

Solution of Arsenic.

℞ White arsenic, one scruple.
Distilled water, two fl. ounces.

Dissolve. This and the foregoing ointments have been employed as applications to cancerous sores, but are always dangerous from the poisonous symptoms induced by the absorption of the arsenic.

Arsenical Pills.

℞ White arsenic, two grains.
Powdered opium, three grains.
White soap, eight grains.
Powdered liquorice root, q. s.

Mix well and divide into twenty pills. Each of these pills contains $\frac{1}{10}$th of a grain of arsenic. They have been given in doses of one or two three times a day, according to circumstances, in diseases of an intermittent character. *Ellis.*

Arsenic and Pepper Pills.

℞ White arsenic, one grain.
Black pepper, twelve grains.
Gum Arabic, two grains.
Distilled water, q. s.

Triturate the arsenic and pepper for a long time, add the gum and water, and rub well together. Make twelve pills; each of which will contain $\frac{1}{12}$th of a grain of arsenic. *Guibourt.*

℞ White arsenic, fifty-five grains.
Powdered black pepper, nine drachms.
Conserve of roses, sufficient.

Mix, and make eight hundred pills. One daily in chronic psoriasis. *Cazenave and Schedel.*

Pills of Arsenic and Opium.

℞ Arsenious acid, two grains.
Powdered opium, eight grains.
Soap, one scruple.

Beat together and divide into twenty-four pills. One to be taken three times a day. Have been found useful in intermittent fevers, periodical headaches, neuralgia, and lepra. *A. T. Thomson.*

ACIDUM BENZOICUM.

Benzoic Acid.

℞ Benzoin, a pound.

Put it into a flat-bottomed iron dish on a sand-bath, gradually increase the heat, pass the vapors through a sheet of filtering paper into a receiver of thick well-sized paper, and remove from the latter the benzoic acid from time to time, as long as it sublimes without much empyreuma. *U. S. Ph.*

Benzoic acid is in the form of white, feathery hexagonal crystals, when chemically pure having no odor, but usually with an agreeable smell from the presence of oil. The taste is acid and acrid. It is converted into hippuric acid, and voided by the urine when taken by man, and has been recommended in the uric acid diathesis and gout, but does not appear to be of any benefit. It has, however, been serviceable in catarrh of the bladder, and where there is a secretion of granular mucus with phosphates. It is also beneficial as a stimulating expectorant. Dose, ten to fifteen grains.

Mixture of Benzoic Acid and Copaiba.

℞ Benzoic acid, one drachm.
Copaiba, half fl. ounce.
White of egg, q. s.
Camphor water, seven fl. ounces.

Mix. Dose, two tablespoonfuls three times a day. Recommended in chronic dysuria and vesical irritation. *Walker.*

Powder of Benzoic Acid and Ipecacuanha.

℞ Benzoic acid, two scruples.
Ipecacuanha, six grains.
Golden sulphur of antimony, three grains.
White sugar, one drachm.

Mix and triturate well. Divide into six powders. Dose, one, four times a day, in barley water. Said to be useful in asthenic pneumonia. *Phœbus.*

Mixture of Benzoic Acid.

℞ Benzoic acid,
Sulphur, each, one scruple.
Ipecacuanha, six grains.
Honey, six ounces.
Syrup of seneka,
Syrup of squills, each, one ounce.

Mix. Dose, a teaspoonful, three or four times a day, in the chronic catarrh of elderly persons. *St. Marie.*

ACIDUM BORACICUM.

Boracic Acid.

℞ Powdered borax, forty parts.
Boiling water, one hundred parts.

Dissolve and add

Muriatic acid, twenty-five parts.

Collect the acid, which crystallizes on cool-

ing, on a filter, drain, wash with cold water, and dry at 234° F. If not pure, dissolve and recrystallize. *Wackenroder.*

If sulphuric acid be used it is almost impossible to free the boracic acid from a trace of it. Dose, ten to sixty grains.

Mixture of Boracic Acid.

℞. Boracic acid, ten grains.
Oil of sweet almonds,
Syrup of lemons, each, one fl. drachm.

Mix. Advised in cardialgia; to be repeated until a cessation of the pain. *Pierquin.*

Collutory with Boracic Acid.

℞. Cloves, Galangal, Ginger, Peruvian bark, each, two drachms.
Gum lac, one and a half drachms.
Benzoin,
Storax, each, half a drachm.
Alcohol, six fl. drachms.
Acetic acid, one and a half fl. ounce.
Vinegar, five fl. ounces.

Macerate, press, and filter, then add

Boracic acid, half a drachm.

This has been recommended as a mouth wash in a scorbutic condition of the gums. When used it is to be diluted with water. *Phœbus.*

ACIDUM CARBOLICUM.

Carbolic Acid.

Syn. Phenic acid; phenylic acid; phenylic alcohol; phenol.

It is obtained by fractional distillation of coal tar, between the temperatures of 300° and 400°, and subsequent purification. It occurs in colorless or white acicular crystals, which fuse at a temperature of about 100° to a colorless liquid, having an odor and taste resembling creasote, and boiling near 370°. It dissolves freely in alcohol, ether, glycerin, and the essential oils, and requires about 20 parts of water for solution; its solution does not affect litmus paper, and coagulates collodion. Its compounds with alkalies are readily decomposed by the acids, including carbonic acid. When 9 parts of it are dissolved in 5 parts of alcohol, and mixed with 60 parts of water and one part of solution of sesquichloride of iron, sp. gr. 1.34, the mixture assumes permanently a beautiful blue color. (*Flückiger.*)

In its pure state it acts as an escharotic; when diluted, its properties are rubefacient, anæsthetic, and antiseptic. Taken internally it is carminative and sedative, resembling creasote in its power of allaying gastric irritability. It is best administered largely diluted or in mucilaginous liquids, with some aromatic to correct and cover its odor.

Dose, one-half to three grains, twice or three times daily.

Glycerite of Carbolic Acid.

℞. Carbolic acid, two troyounces.
Glycerin, half a pint.

Rub these together in a mortar until the acid is dissolved. *U. S. Ph.*

Used in herpes and similar skin diseases. Glycerin of carbolic acid, *Brit. Ph.*, is nearly identical with the above.

Carbolic Acid Water.

℞. Glycerite of carbolic acid, ten fl. drachms.
Distilled water, sufficient to make one pint.

Mix. *U. S. Ph.*

Carbolized Vinegar.

℞. Common vinegar, four parts.
Carbolic acid, one part.

Dissolve. *Quesneville.*

Used as a disinfectant and antiseptic in place of aromatic vinegar.

Disinfectant Carbolic Acid Powder.

℞. Plaster Paris, one thousand parts.
Carbolic acid, one part.

Mix thoroughly. *Bouchardat.*

Carbolized Ether.

℞. Ether, one hundred parts.
Carbolic acid, one part.

Dissolve. *Lémaire.*

Used for insufflation in catarrh of the Eustachian tube.

Inhalations of Carbolic Acid.

℞. Carbolic acid, one drachm.
Water, six fl. ounces.

Mix. In croup. *J. L. Smith.*

℞. Carbolic acid, fifteen to twenty drops.
Tincture of conium, one to two fl. ounces.
Water, two pints.

Mix. In bronchitis. *Stillé.*

Carbolic Acid Mixture.

℞ Carbolic acid, half a drachm.
Acetic acid,
Tincture of opium,
Chloric ether, each, one fl. drachm.
Water, eight fl. ounces.

Mix. A tablespoonful every four hours, until the fever has subsided, in zymotic diseases. *A. Keith.*

℞ Carbolic acid, two grains and a half.
Distilled water, three fl. ounces.
Orange-flower water, half a fl. ounce.
Syrup of orange peel, a fl. ounce.

Mix. To be taken in three doses in two hours, in cholera. *Dussau.*

Carbolic Acid Gargle.

℞ Carbolic acid, twenty grains.
Acetic acid, half a drachm.
Honey,
Tincture of myrrh, of each, two drachms.
Water, sufficient for six fl. ounces.

Mix. Used in diphtheria. *Hartshorne.*

Mouth Wash of Carbolic Acid.

℞ Carbolic acid, eight grains.
Water, four fl. ounces.

Dissolve. As a mouth wash and gargle in sore throat. *Kempster.*

Lotion of Carbolic Acid.

℞ Carbolic acid, one to two drachms.
Alcohol, one fl. ounce.
Water, two pints.

Mix. In cancerous ulcerations, and by substituting lime-water for the water, as an application in burns. *Barclay.*

℞ Carbolic acid, fourteen grains.
Acetic acid, one ounce.
Water, three ounces.

Mix. In itch and other parasitic diseases. *Bazin.*

Carbolic Acid Liniment.

℞ Carbolic acid, one part.
Olive oil, six parts.

Mix. For burns, to relieve pain and promote the healing process without suppuration. *Pirrie.*

℞ Carbolic acid, one drachm.
Alcohol,
Water, each, six ounces.

Mix. As a rubefacient, in cholera. *Dussau.*

Carbolic Acid Ointment.

℞ Carbolic acid, sixty grains.
Ointment, four hundred and twenty grains.

Mix thoroughly. *U. S. Ph.*

Suppositories of Carbolic Acid.

℞ Carbolic acid, twelve grains.
Oil of Theobroma, 348 grains.

Dissolve the carbolic acid in a few drops of water, and mix the solution first with sixty grains of the oil of theobroma, and afterwards with the remainder, which has been previously melted and allowed to cool to 95°; then pour into suitable moulds and make twelve suppositories. *U. S. Ph.*

ACIDUM CARBOLICUM IMPURUM.

Impure Carbolic Acid.

It is a colorless liquid becoming reddish-brown on exposure, and having the odor and taste of the pure acid, modified by empyreumatic constituents of tar, which should not exceed 30 per cent. by measure of the impure acid, the impurities being nearly insoluble in water. It is used only as an external remedy and for disinfecting purposes.

Carbolic Acid Clay.

℞ Clay in powder, eighty parts.
Impure carbolic acid, twenty parts.

Mix thoroughly. Useful for destroying parasitic insects upon plants, and for disinfecting purposes. *C. O. Curtman.*

ACIDUM CARBONICUM.

Carbonic Acid.

This stimulating gas is readily absorbed by water, and advantage has been taken of the fact by retaining it in a liquid form under pressure. The mineral or soda water of the shops is water saturated with carbonic acid gas.

Carbonic Acid Water.

By means of a forcing-pump, throw into a suitable receiver, nearly filled with water, a quantity of carbonic acid equal to five times the bulk of the water. *U. S. Ph.*

Carbonic acid is readily obtained from marble by means of dilute sulphuric acid.

This water has a sharp, pungent, and agreeable taste. It is much used as a common drink in doses of half a pint.

ACIDUM CHROMICUM.

Chromic Acid.

It is obtained by saturating water at the ordinary temperature with bichromate of potassium, and pouring two pints of this solution slowly and with constant stirring into three pints of concentrated sulphuric acid. After one or two days the crystals are collected and dried upon porous tiles under a bell-glass, to protect them from dust. *Warrington.*

It occurs in deep-red needles, which are deliquescent, readily soluble in water, and oxidize organic matters rapidly. It is employed as a powerful and convenient escharotic in cancerous ulcerations, and for removing warts and other morbid growths. It may be applied in substance to the moistened part, or in solution. It is never used internally.

Solution of Chromic Acid.

℞. Chromic acid, one hundred grains.
Distilled water, one ounce.
Dissolve. *Marshall.*

ACIDUM CITRICUM.

Citric Acid.

This exists naturally in the juices of many fruits; to obtain it pure, boiling lemon or lime-juice is to be saturated with chalk, when carbonic acid is given off, and an insoluble citrate is formed; this is to be washed and decomposed by boiling with dilute sulphuric acid; insoluble sulphate of calcium precipitates, and the citric acid remains in solution and crystallizes on evaporation. To purify, dissolve in water and recrystallize. *U. S. Dis.*

Dose, five to twenty grains.

Artificial Lemon Juice.

℞. Citric acid, one ounce.
Distilled water, fourteen fl. ounces.
Oil of lemons, five drops.
Mix. *Beasley.*

Lozenges of Citric Acid.

℞. Citric acid, three drachms.
White sugar, one pound.
Oil of lemons, sixteen drops.
Triturate well, and add
Mucilage of tragacanth, q. s.
Make lozenges of twelve grains each. *Cottereau.*

℞. Citric acid, two drachms.
Oil of lemons, four minims.
Syrup, two pints.
Rub the citric acid and oil of lemons with an ounce of the syrup, then add rest of syrup, and dissolve by a gentle heat. *U. S. Ph.*

℞. Citric acid, five drachms.
Water, ten fl. drachms.
Simple syrup, sixty troyounces.
Spirit of fresh lemon-peel, seven and a half drachms.
Dissolve the acid in the water, mix with the syrup at a boiling heat, and, when cold, add the spirit. *Paris Codex.*

Dry Lemonade.

℞. Citric acid, two and a half drs.
White sugar, four ounces.
Oil of lemons, one drop.
Mix well. A spoonful to a tumbler of water. *Ph. Germ.*

Citrated Effervescing Powders.

℞. Citric acid, nine drachms.
Divide into eighteen powders.
℞. Bicarbonate of sodium, eleven drs.
or,
Bicarbonate of potassium, thirteen drs.
Divide into eighteen powders. *Dub. Ph.*

An acid and an alkaline powder are dissolved in separate portions of water, the two solutions are mixed and drank in a state of effervescence. An excellent refrigerant.

ACIDUM GALLICUM.

Gallic Acid.

It is not certain that this acid exists as such in nature, or whether it arises from the decomposition of tannic acid. It is usually prepared from galls. Many processes have been devised.

℞. Decoction of galls, at will.
Expose to action of air in a loosely covered vessel for some months; it will grow mouldy, and become covered with a glutinous pellicle, and gallic acid will be deposited on the sides of the vessel and on the under surface of the pellicle; collect, dissolve, and recrystallize. *Scheele.*

This is analogous to the process officinal in the *U. S. Ph.*

℞. Decoction of galls, at will.
Sulphuric acid, sufficient
to precipitate. Wash the precipitate with and dissolve by aid of heat in diluted sulphuric acid, boil for a few minutes, let cool, and collect the crystals. *Liebig.*

Gallic acid is a powerful astringent, and has been found useful in hemorrhages and

fluxes, as well as in checking night sweats in phthisis.

Dose, five to ten grains.

Glycerite of Gallic Acid.

℞. Gallic acid, two troyounces.
Glycerin, half a pint.
Dissolve by the aid of heat. *U. S. Ph.*

Glycerin of gallic acid, *Brit. Ph.*, is nearly identical with this.

Mixture of Gallic and Sulphuric Acids.

℞. Gallic acid, thirty grains.
Dilute sulphuric acid, one fl. drm.
Sedative solution of opium, thirty minims.
Compound infusion of rose, six fl. ounces.

Mix. Dose, two tablespoonfuls every three or four hours, in hæmoptysis. *Earle.*

℞. Gallic acid, one to two drachms.
Dilute sulphuric acid, half a fl. drm.
Tincture of hops, one fl. drachm.
Infusion of hops, six fl. ounces.

Mix. Dose, a tablespoonful three times daily, in Bright's disease. *Aitken.*

Aromatic Syrup of Gallic Acid.

℞. Gallic acid, two and a half drs.
Syrup of cinnamon, four fl. oz.

Dissolve. Dose, a dessertspoonful every two, three, or four hours, in hemorrhages, diabetes, etc. *Hartshorne.*

Compound Mixture of Gallic Acid.

℞. Gallic acid, twelve grains.
Compound tincture of cinnamon, one and a half fl. drachms.
Tincture of opium, eight minims.
Caraway water, sufficient for two fl. ounces.

Mix. Dose, two teaspoonfuls for a child two years old, in chronic diarrhœa and gastric irritation. *Hillier.*

Pills of Gallic Acid.

℞. Gallic acid, q. s.
Extract of gentian, sufficient

to form pills of two to five grains each. One to be given every three or four hours.

Useful in menorrhagia, hæmaturia, etc. *Dunglison.*

℞. Gallic acid, forty grains.
Extract of Indian hemp, five grs.
Confection of rose, ten grains.

Make into ten pills. Dose, one at bedtime, for night sweats of consumptives. *Tanner.*

Injection of Gallic Acid.

℞. Gallic acid, one scruple to one drachm.
Water, two pints.

Mix. Found beneficial in leucorrhœa. *Dunglison.*

ACIDUM HYDROCYANICUM DILUTUM.

Hydrocyanic Acid.

℞. Ferrocyanide of potassium, two ounces.
Sulphuric acid, one ounce and a half.
Distilled water, sufficient.

Mix the acid with four fl. ounces of the water, and pour the mixture, when cool, into a glass retort. To this add the ferrocyanide, previously dissolved in ten fl. ounces of the water. Pour eight fl. ounces of distilled water into a cooled receiver, and having attached the retort, distil on a sand-bath, with a moderate heat, six fl. ounces. Lastly, add to the product, five fl. ounces of distilled water, or as much as will render the acid of such strength that 100 grains will be accurately saturated by 12.7 grains of nitrate of silver. *U. S. Ph.*

Extemporaneous Hydrocyanic Acid.

℞. Cyanide of silver, fifty grains and a half.
Muriatic acid, forty-one grains.
Distilled water, one fl. ounce.

Mix the acid with the water, add the cyanide, and shake in a well-stopped bottle. Let settle, decant, and keep for use. *U. S. Ph.*

This acid should be kept in closely-stopped bottles, protected from the light. It is a transparent, volatile liquid, of a cooling and then somewhat irritating taste, and a peculiar smell. It is the most active poison known, and must be used with extreme caution. It is used as an anodyne and antispasmodic, in many diseases. The dose is from one to two drops mixed with gum-water or syrup, always beginning with the smallest quantity and gradually increasing.

Mixture of Hydrocyanic Acid.

℞. Medicinal hydrocyanic acid, one fl. drachm.
Distilled water, one pint.
Sugar, one ounce and a half.

Mix. A dessertspoonful twice a day, gradually increasing the dose. *Magendie.*

℞. Medicinal hydrocyanic acid, sixteen drops.
Syrup of wild cherry,
Camphor water, of each, one fl. oz.

Mix. Dose, a teaspoonful every two or three hours, in violent, troublesome cough. *Hartshorne.*

℞. Powdered gum Arabic, half an oz.
Water, seven fl. ounces and a half.

Dissolve, and add

Syrup of tolu, half fl. ounce.
Diluted hydrocyanic acid, twelve drops.

Mix. A tablespoonful every three hours in the cough of phthisis. *S. G. Morton.*

Syrup of Hydrocyanic Acid.

℞. Medicinal hydrocyanic acid, one part.
Clarified syrup, one hundred and ninety-nine parts.

Mix. This should be made only when needed, as it readily alters. *Paris Codex.*

Julep of Hydrocyanic Acid.

℞. Medicinal hydrocyanic acid, fifteen drops.
Hoffman's anodyne, two fl. ounces.
Syrup of marsh mallow, three fl. ounces.

Mix. A dessertspoonful every two hours. *Pierquin.*

℞. Medicinal hydrocyanic acid, two to four drops.
Syrup of peppermint, one fl. ounce.
Infusion of linden, four fl. ounces.

Mix. A dessertspoonful every hour. *Foy.*

Inhalation of Hydrocyanic Acid.

℞. Diluted hydrocyanic acid, ten to fifteen minims.
Cold water, one fl. drachm.

Mix in a suitable apparatus, and let the vapor that arises be inhaled. *Brit. Ph.*

Injection of Hydrocyanic Acid.

℞. Medicinal hydrocyanic acid, one part.
Distilled water, four parts.

In gonorrhœa. *Foy.*

Glycerite of Hydrocyanic Acid.

℞. Medicinal hydrocyanic acid, ten to forty minims.
Glycerin, one fl. ounce.

Mix. Used as a lotion in impetigo, eczema, urticaria, etc. *Waring.*

Lotion of Hydrocyanic Acid.

℞. Diluted hydrocyanic acid, half fl. ounce.
Alcohol, one fl. ounce.
Distilled water, ten fl. ounces and a half.

Mix. As lotion, in impetigo. *A. T. Thomson.*

℞. Medicinal hydrocyanic acid, two fl. drachms.
Alcohol, fourteen fl. drachms.
Emulsion of bitter almonds (made with thirty kernels), six fl. ounces.

Mix. As an antipruritic in eczema. *Erasmus Wilson.*

℞. Medicinal hydrocyanic acid, two fl. drachms.
Lettuce water, two pints.

Mix. In hepatic affections. *Magendie.*

℞. Diluted hydrocyanic acid, half fl. drachm.
Bicarbonate of sodium, two drachms.
Milk, eight fl. ounces.

Mix. In milky scall. *A. T. Thomson.*

ACIDUM HYDRIODICUM.

HYDRIODIC ACID.

℞. Tartaric acid, two hundred and sixty-four grains.
Iodide of potassium, three hundred and thirty grains.

Dissolve each in one fl. ounce and a half of distilled water. Mix the solutions, shake and let settle, filter, and add distilled water to make up measure of six and a quarter fl. ounces. *Buchanan.*

Has the same properties as iodine, of which each fl. drachm contains five grains; dose, at first a few drops, gradually increased to half a fl. ounce three times a day.

ACIDUM HYDROSULPHURICUM.

SULPHURETTED HYDROGEN.

℞. Sulphuret of iron,
Sulphuric acid, equal parts.

Pulverize the sulphuret, and gradually pour on it the acid diluted with three times its

weight of water, and collect the gas; or it may be passed through water to saturation.
Van Mons.

This gas is an active poison, but has been administered in colica pictonum and mercurial affections. It is, however, more employed externally in cutaneous diseases.

Hydrosulphuretted Bath.

℞ Sulphuret of potassium, four ounces.
Water, one pint.

Dissolve, and add

Muriatic acid, two drachms.

Pour the whole into the bath. Advised in chronic diseases of the skin, rheumatism, and certain cases of paralysis.
Cadet de Gassicourt.

Artificial Sulphuretted Water.

℞ Carbonate of sodium, twelve grains.
Liquid hydrosulphuric acid, two pints.
Water, six pints.

To be kept in well-closed bottles. Has been recommended in colica pictonum. *Foy.*

Hydrosulphuretted Lotion.

℞ Sulphuret of potassium, twenty-four parts.
Water, two hundred and fifty parts.

Dissolve, and add

Sulphuric acid, one part.

Used as a wash in chronic diseases of the skin. *Dupuytren.*

ACIDUM LACTICUM.

Lactic Acid.

℞ Sugar, six pounds.
Tartaric acid, half an ounce.
Boiling water, twenty-six pounds.

Mix, set aside for a few days, then add

Old stinking cheese, eight ounces,

well diffused in

Curdled acid skimmed milk, eight pounds.
Powdered chalk, three pounds.

Place in a warm situation, so as to keep the mixture at a temperature of 86° to 95°. Stir often; in eight or ten days it will solidify into a stiff paste of lactate of calcium; now add twenty pounds of boiling water, and half an ounce of caustic lime, boil for half an hour, and filter through linen. Evaporate the liquid to the consistence of syrup, and set aside for four days; remove the lactate of calcium, express, agitate with one-tenth of cold water, and express, repeating this operation two or three times. Now dissolve in twice its weight of boiling water, and for every pound of the lactate, add three and a half ounces of sulphuric acid diluted with an equal weight of water. Filter the hot liquid through a bag, and boil it with one pound and three-eighths of carbonate of zinc, for every pound of sulphuric acid, for a quarter of an hour. Filter whilst boiling hot, and let stand to crystallize; remove these crystalline crusts of lactate of zinc, and wash them with cold water. Then dissolve them in seven and a half parts of boiling water, and pass through the solution a current of sulphuretted hydrogen, till sulphuret of zinc no longer separates. Filter, boil the liquid, to expel the excess of sulphuretted hydrogen, and evaporate on a water-bath to the consistence of syrup.
Bensch.

A solution of ten ounces of milk-sugar in nine pints of milk is exposed to the air in a warm place (90° to 100° F.), and the free acid neutralized every other day with bicarbonate of sodium. When it ceases to become acid, the liquid is boiled, filtered, and carefully evaporated to the consistence of syrup. This is dissolved in alcohol, the sodium precipitated by sulphuric acid, the filtrate neutralized with chalk, and the clear liquid evaporated to crystallization. The lactate of calcium is either decomposed by the exact quantity of oxalic acid, or it is converted into lactate of zinc, and this further treated as in the previous process.
Boutron and Frémy.

The officinal lactic acid is a nearly colorless syrupy liquid, of sp. gr. 1.212; which is soluble in water, alcohol, and ether in all proportions, and is not precipitated by acetate of lead, oxalate of ammonium, or, after neutralization with ammonia, by sulphuretted hydrogen. When gently heated, it yields no odor of acetic or butyric acid. Ninety grains of it should neutralize at least seventy-two grains of bicarbonate of potassium.
U. S. Ph.

Lactic acid has the sp. gr. 1.24, *Ph. Germ.*

It has been recommended by Magendie in dyspepsia, by Bricheteau and Dureau in croup and diphtheria as a solvent of false mucous membranes, and is considered by some to be useful in a phosphatic diathesis.

Dose, one to three drachms daily.

Lozenges of Lactic Acid.

℞ Lactic acid, two drachms.
Powdered white sugar, nine ozs.
Gum tragacanth, q. s.
Vanilla, fifteen grains.

Mix, and form pastilles of half a drachm each, of which three to six may be taken during the day. They should be kept dry.
Soubeiran.

Lemonade of Lactic Acid.

℞. Lactic acid, one to four drachms.
Simple syrup, two ounces.
Water, two pints.

Mix. Dose, a cupful several times a day.
Magendie.

Inhalation of Lactic Acid.

℞. Lactic acid, twenty drops.
Water, half an ounce.

Mix. Applied in the form of spray, in croup. *A. Weber.*

ACIDUM MURIATICUM.

Muriatic Acid.

Prepared by distilling common salt in a glass retort with sulphuric acid and water. It has a density of 1.16, a suffocating odor, an acrid and sour taste. It is very volatile. It gives a curdy-white precipitate with nitrate of silver. It is never given internally except in a diluted form.

Pure muriatic acid of *Ph. Germ.* has the sp. gr. 1.124.

Diluted Muriatic Acid.

℞. Muriatic acid, four troyounces.
Distilled water, sufficient to make one pint.

Mix. Twenty drops in sweetened water.
U. S. Ph.

Sp. gr. 1.038, *U. S.*; 1.052, *Brit.*; 1.060, *Germ.*

Gaseous Muriatic Acid.

℞. Common salt, two parts.
Sulphuric acid, three parts.

Mix. The muriatic acid fumes that arise are disinfectant if the atmosphere is charged with ammoniacal exhalations, but are much inferior to chlorine. *Swediaur.*

Muriatic Acid Bath.

℞. Muriatic acid, ten fl. ounces.
Water, fifty gallons.

Mix. Found useful in some chronic diseases of the skin. *Soubeiran.*

Muriatic Acid Gargle.

℞. Muriatic acid, two fl. drachms.
Honey, two fl. ounces.
Barley water, one pint.

Mix. Useful in the angina of scarlet fever, and in ulceration of the mouth and throat.
Ratier.

Muriatic Acid Mixture.

℞. Diluted muriatic acid,
one and a half fl. drachms.
Spirit of chloroform,
two fl. drachms.
Tincture of colchicum,
one fl. drachm.
Infusion of cascarilla,
sufficient for six fl. ounces.

Mix. Dose, two tablespoonfuls every three hours, in gout. *J. F. Duncan.*

Syrup of Muriatic Acid.

℞. Muriatic acid, three drachms.
Simple syrup, six troyounces.

Mix. Dose, one half to one teaspoonful.
Mouchon.

Muriatic Acid Lotion.

℞. Muriatic acid, one part.
Water. sixteen parts.

Mix. Advised as a wash for chilblains, and also found beneficial in lepra and other skin diseases. *Foy.*

Muriatic Acid Pediluvium.

℞. Muriatic acid, two fl. ounces.
Water, eight pints.

Mix. Advised by Scott and others in chronic enlargements of the liver and spleen.
Beral.

Muriatic Acid Draught.

℞. Muriatic acid, ten to twenty drops.
Barley water, eight ounces.

Mix. Dose, a tablespoonful three or four times a day. Has been advised in stone in the bladder. *Ellis.*

Muriatic Acid Injection.

℞. Muriatic acid, two drops.
Water, four fl. ounces.

Mix. For injection into the bladder, in phosphatic calculus. *Balman.*

Muriatic Acid Liniment.

℞. Balsam Peru, one drachm.
Spermaceti,
White wax,
Muriatic acid, each, two drachms.
Olive oil, two fl. ounces.
Water, six fl. ounces.

Rub well together. To be applied twice a day. *Ratier.*

ACIDUM NITRICUM.

Nitric Acid.

Nitric acid of the sp. gr. 1.42.

Crude nitric acid, *Ph. Germ.*, has the sp. gr. 1.323 to 1.331; the pure acid is of 1.185, and fuming nitric acid of 1.520 to 1.525 sp. gr.

Diluted Nitric Acid.

℞. Nitric acid (*sp. gr.* 1.42), three troyounces.
Distilled water, sufficient to make a pint.

Mix. Dose, twenty to forty drops, in sweetened water, three times a day. *U. S. Ph.*

The sp. gr. of diluted nitric acid is 1.068, *U. S. Ph.;* 1.086 to 1.089, *Ph. Germ.;* 1.101, *Brit. Ph.*

Collutory of Nitric Acid.

℞. Nitric acid, one fl. scruple.
Honey of roses,
Syrup of mulberries, each, half fl. ounce.

Mix. To touch obstinate venereal ulcers in the mouth. *Phœbus.*

Fomentation of Nitric Acid.

℞. Nitric acid, one part.
Distilled water, ninety-six parts.

Mix. Used to destroy the fetid smell of foul ulcers; also as a wash in itch. *Soubeiran.*

Lotion of Nitric Acid.

℞. Nitric acid, half to one fl. drachm.
Laudanum one fl. drachm.
Rose water, six fl. ounces.

Mix. To wash venereal ulcers. *Phœbus.*

Nitric Acid Lemonade.

℞. Nitric acid, forty-eight grains.
Simple syrup, five troyounces.
Water, forty-five troyounces.

Mix. *Paris Codex.*

Nitric Acid Mixture.

℞. Nitric acid, two fl. drachms.
Raspberry syrup, three fl. ounces.
Sugar, three ounces.
Water, two pints.

A wineglassful, with as much Seltzer water, in fetid breath. *Cadet.*

℞. Nitric acid, half fl. drachm.
Water, one pint and a half.
Syrup of cinnamon, one fl. ounce and a half.

Mix. In syphilis, chronic hepatitis, etc. A spoonful every two or three hours. *Augustin.*

℞. Nitric acid, two fl. scruples.
Opium, two grains.
Water, two fl. ounces.
Syrup of cinnamon, half fl. ounce.

Mix. A spoonful every hour, in barley water. In dysentery, cholera, etc. *Ammon.*

℞. Nitric acid, half fl. drachm.
Gum Arabic,
Sugar, each, three drachms.
Water, eight fl. ounces.

Mix. A small tablespoonful in water, as occasion may require. As a tonic, to arrest colliquative sweats, etc. *Ellis.*

Ointment of Nitric Acid.

℞. Lard, fifty parts.
Nitric acid, three parts.

Mix and stir at a moderate heat until blue litmus paper is scarcely reddened; then pour into paper moulds. Used as an application to porrigo, psora, etc. *Ph. Germ.*

Liniment of Nitric Acid.

℞. Nitric acid, two fl. ounces.
Oil of turpentine, three fl. ounces.
Theriac, three drachms.
Honey, one ounce.
Alcohol, six fl. ounces.

Mix. As a rubefacient, has been used in cholera. *Foy.*

Injection of Nitric Acid.

℞. Nitric acid, twenty drops.
Water, eight fl. ounces.

Mix. A teaspoonful to be injected every hour, in gleet. *Durkee.*

ACIDUM NITRO-MURIATICUM.

Nitro-Muriatic Acid.

℞. Nitric acid, three troyounces.
Muriatic acid, five troyounces.

Mix in a glass vessel, and when effervescence has ceased keep in a cool, dark place. *U. S. Ph.*

Dose, three or four drops.

℞. Muriatic acid, three parts.
Nitric acid, one part.
Mix. *Paris Codex* and *Ph. Germ.*

Diluted Nitro-Muriatic Acid.

℞. Nitric acid, one and a half troyounces.
Muriatic acid, two and a half troyounces.
Distilled water, sufficient to make a pint.

Mix the acids, shake occasionally during twenty-four hours, then add the water. *U. S. Ph.*

℞. Nitric acid, three fl. ounces.
Muriatic acid, four fl. ounces.
Distilled water, twenty-five fl. ozs.

Mix the acids, and after twenty-four hours add the water. Sp. gr. 1.074. *Brit. Ph.*

Nitro-Muriatic Acid Bath.

℞. Nitro-muriatic acid, six fl. ounces.
Water, three gallons.

Mix. Recommended by Scott as a foot-bath in chronic hepatitis.

ACIDUM OXALICUM.

Oxalic Acid.

This acid exists in many plants in combination with lime or potash, but is usually obtained by the action of nitric acid on sugar or starch. It is in the form of colorless, transparent, prismatic crystals, having no odor, but a very acid taste. This acid is an active poison in large doses. It is not used in medicine in this country, but is employed in France.

Lozenges of Oxalic Acid.

℞. Powdered oxalic acid, one drachm.
White sugar, eight ounces.
Gum tragacanth, two scruples.
Water of orange-peel, five fl. drs.
Oil of lemons, eight drops.

Mix, and form lozenges of ten grains each. *Cottereau.*

ACIDUM PHOSPHORICUM.

Phosphoric Acid.

Glacial Phosphoric Acid.

It is prepared by decomposing calcined bones with sulphuric acid in excess, and purifying the concentrated liquid either by the addition of alcohol, or ammonia, the phosphate of ammonium to be decomposed by heat.

It is in glass-like masses, transparent, colorless, deliquescent on exposure, and soluble in water and alcohol. The aqueous solution, supersaturated with ammonia, produces on standing but a slight precipitate.

Diluted Phosphoric Acid.

℞. Phosphorus, five drachms.
Nitric acid (*sp. gr.* 1.42), five troyounces.
Distilled water, sufficient.

Mix the nitric acid with half a pint of water in a porcelain capsule of the capacity of two pints; add the phosphorus, and invert over it a glass funnel, so that its rim may rest just above the surface of the liquid. Apply heat, taking care not to allow the reaction to become too violent. Should some phosphorus remain undissolved, add more nitric acid, diluted as above, until solution is effected. Then evaporate until all excess of nitric acid has been expelled, and add distilled water sufficient to make the acid measure twenty-five fluidounces. *U. S. Ph.*

℞. Glacial phosphoric acid, a troyounce.
Nitric acid, forty grains.
Distilled water, sufficient.

Dissolve the glacial phosphoric acid in three fluidounces of water, add the nitric acid, and boil until a syrupy liquid is left, to which sufficient water is to be added to make it measure twelve and a half fluidounces. *U. S. Ph.*

The sp. gr. of this acid is 1.056, *U. S. Ph.;* 1.08, *Brit. Ph.;* 1.120, *Ph. Germ.*

This acid is stated to be useful in nervous disorders, in lithiasis with phosphatic deposits, in morbid ossifications, in diabetes, to allay thirst, etc., and as a local application in caries. The dose of the dilute acid is from ten drops to a fluidrachm in gum-water.

Pills of Phosphoric Acid.

℞. Diluted phosphoric acid,
Assafœtida, each, three drachms.
Powdered calamus, q. s.

Make one hundred and eighty pills. Dose, five to ten, three times a day. Recommended in caries. *Phœbus.*

Fomentation of Phosphoric Acid.

℞. Diluted phosphoric acid, one oz.
Decoction of chamomile, eight ozs.

Mix. Employed in caries, and as an injection in fistulas. *Augustin.*

Phosphoric Tincture of Myrrh.

℞. Tincture of myrrh, half a fl. ounce.
Diluted phosphoric acid, thirty drops.

Mix. Used in caries of the teeth or bones. *Augustin.*

Phosphoric Acid Lemonade.

℞. Phosphoric acid,
(sp. gr. 1.45), forty-eight grains.
Simple syrup, five troyounces.
Water, forty-five troyounces.

Mix. Dose, about an ounce, to relieve thirst in diabetes, etc. *Paris Codex.*

The diluted phosphoric acid, *U. S. Ph.*, is one-eighth the strength of the phosphoric acid of the *Paris Codex.*

ACIDUM SUCCINICUM.

Succinic Acid.

It is obtained from amber, by heating it in a retort until a brown, empyreumatic oil begins to come over. It occurs in yellowish crystals having the odor of oil of amber, freely soluble in alcohol and boiling water, less in ether, and slightly in oil of turpentine. *Ph. Germ.*

It has been recommended as an antispasmodic and diaphoretic in cutaneous diseases, gout, convulsions, etc., but is most frequently employed in its combination with ammonia.

Dose, five to twenty grains, in the form of powder, or dissolved in thirty times its weight of water.

ACIDUM SULPHURICUM.

Sulphuric Acid.

Dilute Sulphuric Acid.

℞. Sulphuric acid, two troyounces.
Water, sufficient to make a pint.

Add the acid gradually to the water in a glass vessel, and mix them. *U. S. Ph.*

Dose, ten to twenty drops.

℞. Sulphuric acid, one part.
Distilled water, nine parts.

Mix. *Paris Codex.*

Its specific gravity is 1.082, *U. S. Ph.*; 1.094, *Brit. Ph.*; 1.113 to 1.117, *Ph. Germ.*

Elixir of Vitriol.

℞. Sulphuric acid, six troyounces.
Ginger, bruised, one troyounce.
Cinnamon, bruised, one troyounce and a half.
Alcohol, sufficient.

Gradually add the acid to a pint of alcohol. Pack the mixed ginger and cinnamon firmly in a percolator, and pour alcohol upon them until a pint of tincture is obtained. Then mix the diluted acid and the tincture. Dose, ten to twenty drops in sweetened water. *U. S. Ph.*

The formula of *Brit. Ph.* orders about one-half of the sulphuric acid and aromatics.

℞. Cinnamon, bruised, four parts.
Cardamom, "
Cloves, "
Galangal, "
Ginger, " each, one part.
Alcohol, sp. gr. 892, fifty parts.
Sulphuric acid, two parts.

Digest for a week, and filter. Used like the preceding, both being simplified substitutes for Mynsicht's elixir. *Ph. Germ.*

Sulphuric Acid and Alcohol.

℞. Sulphuric acid, one part.
Alcohol, three parts.

Add the acid gradually to the alcohol, and mix them. Haller's Elixir. *Ph. Germ.*

Dose, ten to twenty drops in water.

℞. Sulphuric acid, four ounces.
Acetic acid,
Alcohol, each, two pounds.

Mix. Vulnerary, antiseptic, and astringent. Dose, internally, twenty or thirty drops, in an appropriate vehicle. Externally, as a lotion to foul ulcers and contusions, and to arrest bleeding. *Campana.*

℞. Vinegar, six parts.
Alcohol, 68 pr. ct., three parts.
Diluted sulphuric acid, one part.
Clarified honey, two parts.

Mix. Theden's vulnerary. *Ph. Germ.*

Sulphuric Acid and Nitric Ether.

℞. Sulphuric acid,
Nitric ether, equal parts.

Mix very gradually. Dose, five to ten drops in an ounce of water. Found beneficial in spasmodic attacks, sinking, and hemorrhages. *Vogler.*

Sulphuric Acid Lemonade.

℞. Sulphuric acid, forty-eight grains.
Simple syrup, five troyounces.
Water, forty-five troyounces.

Mix. As a cooling drink in hemorrhages, and also found useful as a preventive of the effects of lead. *Paris Codex.*

Sulphuric Acid Liniment.

℞ Sulphuric acid, two drachms.
Olive oil, two and a half ounces.
Oil of turpentine, one ounce.

Mix. In gentle frictions to chilblains, where the skin is not broken. *Foy.*

Sulphuric Acid Ointment.

℞ Olive oil, eight parts.

Add gradually, constantly stirring.

Sulphuric acid, five parts.

After standing for twenty-four hours, wash well in tepid water, till it will not redden litmus-paper. Has been used in itch and paralysis, in frictions. *Brugnatelli.*

ACIDUM SULPHUROSUM.

Sulphurous Acid.

℞ Sulphuric acid, eight troyounces.
Charcoal in coarse powder, one troyounce.
Distilled water, thirty-six fl. ounces.

Mix the acid and charcoal in a matrass, apply heat until gas ceases to be evolved, and pass the sulphurous acid gas first through a washing bottle containing some water into the distilled water contained in a two-necked bottle, which is to be kept cool; the unabsorbed gas should be conducted into a solution of carbonate of sodium. *U. S. Ph.*

The specific gravity of this acid is about 1.035 *U. S. Ph.*, 1.04 *Brit. Ph.* It has a strong odor of burning sulphur, and should be protected from contact with the atmosphere. It acts powerfully as a disinfectant and antiseptic, is employed externally in skin diseases of parasitic origin, and has been recommended in typhoid fever and in diseases of the air-passages. Dose, twenty minims to a teaspoonful, largely diluted.

Sulphurous Acid Mixture.

℞ Sulphurous acid, two to four drachms.
Syrup of orange peel, half an ounce.
Water, sufficient for six fl. ounces.

Mix. Dose a tablespoonful every four hours in typhoid fever. Where diarrhœa is present, two drachms of dilute sulphuric acid and twenty minims of tincture of opium are added. *G. Wilks.*

ACIDUM TANNICUM.

Tannic Acid.

℞ Powdered galls,
Washed ether, of each, a sufficient quantity.

Expose the powder to a damp atmosphere for 24 hours, then mix with sufficient ether to form a soft paste. After six hours express the mixture enveloped in canvas, powerfully between tinned plates; macerate the residue with a fresh portion of ether, and express as before. Mix the liquids, evaporate spontaneously to a syrupy consistence, spread upon glass or tinned plates, and dry quickly in a drying closet. *U. S. Ph.*

Tannic acid is of a yellowish-white color, of a powerfully astringent taste, soluble in water, less so in alcohol or ether. It is a strong astringent, and has been successfully used in hemorrhage and other fluxes. The dose is from two to ten grains.

Pills of Tannic Acid.

℞ Tannic acid, eight or twelve grains.
Mucilage of tragacanth, sufficient

to make eight pills. One to be given every two or three hours in gonorrhœa. *Ellis.*

Pills of Tannic Acid and Opium.

℞ Tannic acid, half a drachm.
Extract of opium, three-quarters of a grain.
Conserve of roses, sufficient

to make twenty pills. One every hour in uterine hemorrhage. *Dumars.*

Troches of Tannic Acid.

℞ Tannic acid, one troyounce.
Sugar, powdered, ten troyounces.
Tragacanth, powdered, two drachms.
Orange flower water, sufficient.

Beat together into a uniform mass, and divide into four hundred and eighty lozenges. *U. S. Ph.*

Each lozenge contains one grain, or, according to *Brit. Ph.*, half a grain of tannin.

Glycerite of Tannic Acid.

℞ Tannic acid, two troyounces.
Glycerin, half a pint.

Triturate them together, and dissolve by the aid of heat. *U. S. Ph.*

Glycerin of tannic acid, *Brit. Ph.*, is nearly identical with this.

Gargle of Tannic Acid.

℞ Tannic acid, one drachm.
Honey of roses, two ounces.
Rose water, two fl. ounces.
Distilled water, eight fl. ounces.

Mix. As a gargle, to arrest mercurial salivation. *Béral.*

Inhalation of Tannic Acid.

℞ Tannic acid, ten or twenty grains.
Water, one fl. ounce.

Dissolve. Used by atomizer, in hæmoptysis. *Da Costa.*

℞ Tannic acid, three grains.
Extract of hyoscyamus, two grains.
Water, one fl. ounce.

Dissolve. In chronic bronchitis. *Beigel.*

Injection of Tannic Acid.

℞ Tannic acid, half a drachm.
Distilled water, eight fl. ounces.

Dissolve. In gleet and leucorrhœa. *Béral.*

℞ Tannic acid, half a drachm.
Good claret wine, eight fl. ounces.

Dissolve. *Ricord.*

Syrup of Tannin.

℞ Tannic acid, one ounce.
Water, eight ounces.
Sugar, fifteen ounces.

Dissolve with heat and strain. Dose, a tablespoonful in passive hemorrhages. *Foy.*

Aromatic Syrup of Tannin.

℞ Tannic acid, sixty-four grains.
Powdered cinnamon, one drachm.
Powdered nutmeg, half a drachm.
Glycerin, six fl. drachms.
Sugar, seven troyounces.
Water, twenty-two fl. drachms.
Diluted alcohol, sufficient.

Obtain from the aromatic powders, by percolation with diluted alcohol, one fl. ounce of tincture. Dissolve the tannic acid in the glycerin, add the water, boil and filter. Dissolve the sugar in the filtrate, and add the tincture. *D. G. Potts.*

Mixture of Tannic Acid.

℞ Tannic acid, twelve grains.
Syrup of rhatany,
Syrup of gum, each, one fl. ounce.
Camphor water, four fl. ounces.

Mix. Six to twelve spoonfuls a day, in diarrhœa. *Béral.*

Suppositories of Tannic Acid.

℞ Tannic acid, sixty grains.
Oil of theobroma, three hundred grains.

Mix the tannin well with sixty grains of the oil, add it to the remainder of the oil previously melted and cooled again to 95°; then pour into moulds and make twelve suppositories. *U. S. Ph.*

They contain five grains each, or, if made according to *Brit. Ph.*, three grains of tannin.

Ointment of Tannic Acid.

℞ Tannic acid, thirty grains.
Lard, a troyounce.

Rub the tannic acid well with the lard gradually added. *U. S. Ph.*

ACIDUM TARTARICUM.

Tartaric Acid.

Is prepared from bi-tartrate of potassium, by saturating the excess of acid with chalk, and decomposing the insoluble tartrate of calcium by means of dilute sulphuric acid, evaporating and crystallizing.

It is cooling and diuretic in doses of a drachm or more.

Syrup of Tartaric Acid.

℞ Tartaric acid, two ounces.
Distilled water, four ounces.

Dissolve and mix with

Cold simple syrup, ninety-four ounces.

Paris Codex.

Lozenges of Tartaric Acid.

℞ Powdered tartaric acid, three drachms.
White sugar, one pound.
Oil of lemons, sixteen drops.
Mucilage of tragacanth, sufficient.

Make into lozenges of twelve grains. Used to allay thirst. *Cottereau.*

Lemonade of Tartaric Acid.

℞ Syrup of tartaric acid, one part.
Water, nine parts.

Mix. For an agreeable acidulous drink. *Paris Codex.*

Effervescing Powders.

℞. Tartaric acid, five drachms.
Divide into twelve powders.

℞. Bicarbonate of sodium, six drachms.
Divide into twelve powders. *U. S. Ph.*

An acid and alkaline powder are separately dissolved in water, and the mixed solutions are taken in a state of effervescence.

℞. Powdered bicarbonate of sodium, ten parts.
Powdered tartaric acid, nine parts.
Powdered white sugar, nineteen parts.
Dry the articles thoroughly. Mix them, and keep the powder in a dry place. *Ph. Germ.*

ACIDUM VALERIANICUM.

Valerianic Acid.

This acid may be obtained by distilling valerian with water until the distillate ceases to have an acid reaction; the liquid is neutralized with soda, evaporated nearly to crystallization, supersaturated with sulphuric acid, and distilled.

Or valerian may be boiled with a weak solution of carbonate of sodium, the expressed liquid supersaturated with sulphuric acid, and distilled. The acid distillate is neutralized by soda and treated as before; finally the oily acid is separated from the water.

Paris Codex digests one hundred parts of cut valerian, five hundred water, six bichromate of potassium, and ten parts of sulphuric acid for twenty-four hours, distils, and proceeds as above.

Artificial Valerianic Acid.

℞. Bichromate of potassium, ten pounds.
Water, twenty pounds.
Dissolve with heat, allow to cool, and add a mixture of
Sulphuric acid, ten pounds.
Rectified fusel oil, two pounds.
Distil sixteen pounds, add to the residue
Sulphuric acid, six pounds.
And again distil about four pounds. Neutralize the mixed distillates with carbonate of sodium, remove the oil (amyl-valerianate), concentrate the liquid, supersaturate with sulphuric acid, distil, and separate the acid from the water. *Wittstein.*

Valerianic acid is a colorless oily liquid of a penetrating disagreeable odor, and a specific gravity of 0.935 *U. S. Ph.*, 0.940 to 0.950 *Ph. Germ.*, 0.955 *Paris Codex*. It is readily soluble in alcohol and ether, and in thirty parts of cold water, and it dissolves of the latter liquid about twenty per cent.

Valerianic acid is used in medicine only in combination with bases.

ACONITUM.

Aconite. Monkshood.

Many species of Aconitum are officinal in the various pharmacopœias, but the only one recognized by the U. S. Ph. is the *A. napellus*, a native of Europe.

Sext. Syst. Polyand. Trigyn. *Nat. Syst.* Ranunculaceæ.

Linn. Sp. Pl. 751. Griffith, Med. Bot. 90.

The whole plant is possessed of highly deleterious properties, but the root is the most powerful. The leaves are also made use of. They have a somewhat nauseous odor, and a bitterish, acrid taste, followed by a peculiar tingling and burning of the lips. They owe their properties to the presence of an alkaloid called *Aconitia*.

Compound Powder of Aconite.

℞. Powdered aconite leaves,
Precip. sulph. of antimon., each, one grain.
Carbonate of magnesium, one scruple.
Mix. As an anodyne and diaphoretic in gout and rheumatism. *Vogler.*

Extract of Aconite.

℞. Recently dried aconite leaves in fine powder, twelve troyounces.
Alcohol, a pint.
Diluted alcohol, sufficient.
Obtain by displacement, using first the alcohol, afterwards diluted alcohol, three pints of tincture, or enough to exhaust. Evaporate the first pint spontaneously to three fluidounces, and the remaining tincture, by means of a water-bath at 160° F., to a syrupy consistence, add the three fluidounces and evaporate at or below 120° to the proper consistence. *U. S. Ph.*

Paris Codex exhausts with 60 per ct. alcohol.

The extract of aconite of *Brit. Ph.* is the inspissated juice, containing the expressed chlorophyll, but free from the albumen. The inspissated juice of *Paris Codex* contains neither albumen nor chlorophyll.

Dose, one-half to one grain.

Extract of Aconite Root.

℞. Powdered aconite root, two parts.
Alcohol, 68 pr. ct., four parts.

Macerate for a week, express, and treat the residue again with three parts of alcohol of like strength. Filter the mixed tinctures and evaporate to the proper consistence.
Ph. Germ.

Dose, one-eighth to one-third of a grain.

Pills of Extract of Aconite.

℞. Alcoholic extract of aconite, one grain.
Powdered liquorice, twelve grains.
Syrup, sufficient

to form a consistent mass. Divide into six pills. Dose, one every three or four hours.
Turnbull.

Aconite plaster.

℞. Aconite root in powder, sixteen troyounces.
Alcohol,
Resin plaster, each, sufficient.

Exhaust the aconite root by percolation with alcohol, distil off the alcohol, evaporate to a soft extract and add sufficient resin plaster to make the mixture weigh sixteen troyounces. *U. S. Ph.*

Used in neuralgia.

Oleoinfusion of Aconite.

℞. Bruised fresh Aconite leaves, one part.
Olive oil, two parts.

Heat over a slow fire until the moisture has evaporated, strain, and filter. *Paris Codex.*

Aconite Ointment.

℞. Alcoholic extract of aconite, one part.
Lard, two parts.

Recommended as a friction in neuralgia.
Turnbull.

Ointment of Aconite and Chloroform.

℞. Tincture of aconite root,
Chloroform, each, two drachms.
Hog's lard, one troyounce.

Mix. Apply to the part and cover with cotton. *Gray.*

Compound Wine of Aconite.

℞. Alcoholic extract of aconite, one drachm.
Antimonial wine, one ounce.

Make a solution. Dose, fifteen or twenty drops every three hours, gradually increasing till some effect is produced.

Found beneficial in chronic rheumatism, toothache, neuralgia, etc. *Richter.*

Tincture of Aconite Leaves.

℞. Aconite leaves, powered, four parts.
Diluted alcohol, sufficient

to obtain by displacement two pints.
U. S. Ph. 1860.

Dose, ten to twenty drops three times a day. The effects should be carefully watched. In rheumatism, neuralgia, etc.

℞. Aconite leaves, bruised, one part.
Alcohol of 60 per ct. five parts.

Macerate for five days and filter.
Paris Codex.

Tincture of Aconite Root.

℞. Powdered aconite root, twelve troyounces.
Alcohol, sufficient

to obtain by displacement two pints.
U. S. Ph.

Dose, five to eight drops. It is also employed as an embrocation or as an addition to liniments in rheumatism, neuralgia, etc. The tincture of *Brit. Ph.* is nearly one-third, that of *Ph. Germ.* one-fourth the strength of the preceding.

Liniment of Aconite Root.

℞. Powdered aconite root, eight troyounces.
Glycerin, one fl. ounce.
Alcohol, sufficient.

Macerate the aconite with four fl. ounces of alcohol for twenty-four hours, then pack it in a conical percolator, and add alcohol gradually, until two pints of tincture have passed. Distil off a pint and a half, and evaporate the residue to seven fluidounces. To this add the glycerin, and mix them.
U. S. Ph.

For painful sprains, bruises, arthritic swellings, neuralgia, etc.

℞. Aconite root, powdered, twenty ounces.
Camphor, one ounce.
Rectified spirit.

Moisten the aconite with some of the spirit and macerate for three days; then percolate slowly into a receiver containing the camphor until the product measures a pint (twenty fl. ounces). *Brit. Ph.*

Ammoniated Aconite Ointment.

℞ Extract of aconite, one drachm.
Water of ammonia, ten drops.
Lard, three drachms.

Rub the extract and ammonia together until the excess of the latter has evaporated, then add the lard.

Used for the same purposes as the aconite ointment, but more active and pungent. *Turnbull.*

Mixture of Aconite.

℞ Tincture of aconite leaves, one fl. drachm.
Carbonate of sodium, one drachm and a half.
Sulphate of magnesium, one ounce and a half.
Water, six fl. ounces.

Mix. In gastralgia. A tablespoonful, when the pain is urgent. *Fleming.*

ACONITIA

ACONITIA.

℞ Aconite root, in moderately fine powder, forty-eight troy-ounces.
Diluted sulphuric acid, a fl. ounce and a half.
Alcohol, Stronger water of ammonia, Stronger ether, Distilled water, each, sufficient.

Digest the aconite with a gallon of the alcohol for twenty-four hours in a close vessel, transfer to a percolator and obtain twenty-four pints of tincture, distil until one pint is left, to which add a pint of water previously mixed with the acid. Remove the oil and resin, and evaporate to four fl. ounces; agitate this with six fl. ounces of ether to remove more oil and resin, add a slight excess of ammonia, and shake the liquid with three different portions of ether of six fl. ounces each. Mix the ethereal liquids, evaporate spontaneously, and rub the residue to powder. *U. S. Ph.*

The processes of *Brit. Ph.* and *Paris Codex* are more complicated, but yield a purer product.

Not used internally, but successfully employed externally in neuralgia, gout, and rheumatism.

Aconitia Ointment.

℞ Aconitia, eight grains.
Alcohol, half a fluidrachm.
Dissolve, and add,
Prepared lard, one drachm.

Mix thoroughly. *Brit. Ph.*

Employed in neuralgia, by rubbing over the painful parts. A small portion, not exceeding the size of a pea, is to be used at a time. The operation to be repeated three or four times a day.

Aconitia Lotion.

℞ Aconitia, eight grains.
Alcohol, two fl. ounces.

Dissolve. Used by means of a friction-sponge over the affected part. Never to be employed where the skin is broken or abraded. *Turnbull.*

ADIANTUM.

MAIDENHAIR.

Two species of this genus, *A. pedatum* and *A. capillus veneris*, have been much used in Europe as remedies in pectoral affections. They are both bitter and aromatic, but the former is the most active. It is a native of the United States.

Sex. Syst. Cryp. Fil. *Nat. Syst.* Polypodiaceæ.

Syrup of Maidenhair.

℞ Maidenhair, five ounces.
Boiling water, fifty ounces.

Infuse for six hours, strain, and add for every ten ounces of liquids

Sugar, nineteen ounces.

Dissolve in a water-bath. *Dorvault.*

This syrup is known under the name of *syrup of capillaire*, and is much employed in France as a pectoral. Dose, a tablespoonful.

ÆTHER ACETICUS.

ACETIC ETHER.

℞ Alcohol (sp. gr. .835), three thousand parts.
Acetic acid (sp. gr. 1.063), two thousand parts.
Sulphuric acid, six hundred parts.

Mix the alcohol and acetic acid in a glass retort, add gradually the other acid, distil in a sand-bath four thousand parts, rectify this product with a small quantity of carbonate of potassium to obtain three thousand parts. *Codex.*

Its sp. gr. is 0.92, *Paris Codex;* 0.900 to 0.904, *Ph. Germ.*

This ether is milder, more agreeable and

diaphoretic, than the other ethers. It is used in low fevers, spasmodic vomiting, and cardialgia, in doses of ten drops to a drachm.

Spirit of Acetic Ether.

R. Acetic ether,
Alcohol, each, equal parts.
Mix. *Dorvault.*

R. Acetic ether one part.
Alcohol, three parts.
Mix. This is employed as a substitute for Hoffmann's anodyne, in about the same doses. *Giordano.*

Mixture of Acetic Ether.

R. Acetic ether,
Ethereal tincture of valerian,
Tincture of opium, equal parts.
Mix. Dose, from ten to thirty drops, in hysteria and hypochondriasis. *Radius.*

ÆTHER HYDROCYANICUS.

HYDROCYANIC ETHER.

R. Cyanide of potassium,
Sulpho-vinate of barium,
equal parts.

Mix and put in a glass retort, distil by a moderate heat. The product separates into two strata, the lighter of which is impure hydrocyanic ether; this is to be separated and agitated with four or five times its bulk of water at 120° to 140° F., again agitated with a little water, decanted, and placed in contact with chloride of calcium for twenty-four hours, and then distilled.

Sp. gr. 0.78. *Magendie.*

This preparation is said to resemble hydrocyanic acid in its therapeutical effects, but is less active. Its smell is, however, penetrating and offensive. The dose is one to three drops, in mucilage or emulsion, in obstinate or convulsive coughs. It is scarcely ever used.

ÆTHER MURIATICUS.

MURIATIC ETHER.

R. Muriatic acid,
Alcohol, equal parts.

Distil in Wolff's apparatus, and preserve the product contained in the second receiver, surrounded by snow and salt. *Cottereau.*

It has much the same properties as the other ethers. Dose, thirty to forty drops.

Spirit of Muriatic Ether.

R. Muriatic ether,
Alcohol, equal parts.
Mix. Dose, half a teaspoonful. *Cottereau.*

Mixture of Muriatic Ether.

R. Spirit of muriatic ether,
half a fl. drachm.
Parsley water,
Syrup of rhubarb, one fluidounce.
Mix. A teaspoonful every hour for young children as a diuretic. *Wendt.*

Spirit of Chlorated Ether.

(Sweet Spirit of Salt. Chlorated Muriatic Ether.)

R. Hydrochloric acid, six parts.
Alcohol, twenty-four parts.
Mix, and pour into a large retort containing
Black oxide of manganese,
in small pieces, sufficient
to be not completely covered by the liquid. Distil twenty-five parts, neutralize the distillate with lime-water, and obtain by distillation twenty-one parts. Dose, half a teaspoonful. *Ph. Germ.*

ÆTHER (*U. S.*)—ÆTHER SULPHURICUS.

ETHER. SULPHURIC ETHER.

It is an energetic diffusible stimulant, and is much employed as an excitant and antispasmodic in what are termed nervous disorders. It is also considered to be anthelmintic. In vapor it has been used in small quantities as an inhalation in chronic irritations of the lungs, and to induce unconsciousness to pain in surgical operations. The dose of the fluid is from half a fl. drachm to two drachms. Locally applied it produces a sensation of cold and anæsthesia; if the vapor be confined, it acts as a rubefacient.

Ether is obtained by distilling a mixture of alcohol and sulphuric acid at a temperature of between 266° and 280°; the distillate is agitated with a solution of potassa, and then rectified until it attains the sp. gr. 0.750 (0.735, *Brit. Ph.*).

Stronger Ether. Pure Ether.

R. Ether,
Water, each, three pints.
Powdered chloride of calcium,
Powdered lime, each, one ounce.

Shake the ether and water thoroughly, separate the ether and agitate it well with the powders, decant after 24 hours and distil a pint and a half. *U. S. Ph.*

Its specific gravity is 0.728 *U. S. Ph.* and *Germ. Ph.*, 0.720 *Brit. Ph.*, 0.725 *Paris Codex.*

Ethereal Oil.
(Oil of Wine.)

℞. Stronger alcohol, two pints.
Sulphuric acid, fifty-five troyounces.

Mix. Distil at a temperature between 302° and 315°, till a black froth rises in the retort. Let the distillate, in a shallow capsule, evaporate spontaneously for 24 hours, transfer the residue to a wet filter, wash the oil with distilled water, then measure it and mix it with an equal volume of stronger ether. *U. S. Ph.*

Its specific gravity is 0.91.

Spirit of Ether.
(Hoffmann's Anodyne of Germ. Ph. and Paris Codex.)

℞. Ether, one part.
Alcohol, three parts.
Mix. *Ph. Germ.*

℞. Ether,
Stronger alcohol, each, equal parts.
Mix. *Paris Codex.*

℞. Ether, ten fl. ounces.
Alcohol, twenty fl. ounces.
Mix. *Brit. Ph.*

Hoffmann's Anodyne.

℞. Ether, half a pint.
Alcohol, one pint.
Ethereal oil, six fl. drachms.
Mix. *U. S. Ph.*

Dose, a teaspoonful in sweetened water.

Lotion of Sulphuric Ether.

℞. Sulphuric ether, two fl. ounces.
Vinegar, six fl. ounces.
Rose water, four fl. ounces.
Distilled water, two pints.

Mix. As a lotion to painful inflammatory tumors. *Pierquin.*

Syrup of Ether.

℞. Ether,
Alcohol, each, one troyounce.
Water, two troyounces.
Syrup, sixteen troyounces.

Mix in a glass vessel, having a stopcock at the lower part; shake occasionally for a week, and draw off when clear into small bottles. *Paris Codex.*

Dose, half an ounce to an ounce.

Ether Mixture.

℞. Syrup of orange flowers,
Orange-flower water, each, one troyounce.
Linden-flower water, three troyounces.
Ether, thirty-two grains.

Mix. Dose, a tablespoonful. *Paris Codex.*

Mixture of Ether and Opium.

℞. Ether, thirty grains.
Syrup, three hundred grains.
Syrup of orange flowers,
Orange-flower water, each, 450 grains.
Water, six troyounces and a half.

Mix. *Paris Codex.*

Mixture of Sulphuric Ether and Camphor.

℞. Camphor mixture, seven fl. ounces.
Sulphuric ether,
Syrup of saffron, each, half fl. ounce.

Mix. Dose, a tablespoonful.

Mixture of Sulphuric Ether and Turpentine.

℞. Sulphuric ether, one fl. drachm.
Oil of turpentine, two fl. drachms.
Sugar, four drachms.
Water, two fl. ounces.

Mix. Two fl. drachms every quarter of an hour in poisoning by nux vomica. *Orfila.*

ÆTHER TEREBINTHINATUS.

Terebinthinated Ether.

℞. Alcohol, two pounds.
Spirit of turpentine, half a pound.

Mix, and add gradually

Nitric acid, two pounds.

Distil off one-half at a gentle heat. Dose, from twenty to forty drops, in syrup or mucilage. Used internally and externally in cases of biliary calculi, jaundice, engorgements of the liver, and rheumatism. *Cadet.*

ALBUMINUM.

Albumen.

This name is applied to nitrogenated principles contained in animal and vegetable juices; they are coagulated by heat, and become then insoluble in water. Vegetable albumen is not employed in medicine, the variety generally used being the white liquid separated from the yolk of eggs.

Desiccated Albumen.

℞. The whites of eggs, at will.

Spread in thin layers on linen or muslin, stretched over a frame and contained in an airy room, well protected from dust; when dry put on a second layer and so on, until the dry albumen becomes detached in scales.
Stan. Martin.

Water of Albumen.

℞. The whites of four eggs.
Water, two pints.

Beat first with a little water, then add the remainder, strain and add

Orange-flower water, three drachms.

Mix. A demulcent drink and as an antidote to metallic poisons, particularly corrosive sublimate. *Paris Codex.*

Iodated Albumen.

℞. Powdered albumen, one ounce.
Water, ten ounces.

Macerate for twenty-four hours; then add to it gradually a mixture of

Tincture of iodine, one ounce.
Water, two ounces.

Heat the mixture upon a water-bath, evaporate to dryness and reduce the residue to powder. *Renault.*

It forms an inodorous yellowish powder, which swells with water like tragacanth.

ALETRIS.

Star Grass.

Aletris farinosa. Linn. Bigelow, Am. Med. Bot. iii. 50. Griffith, Med. Bot. 623.
Sex. Syst. Hexandria monogynia. *Nat. Syst.* Hæmodoraceæ. Brown.
A native plant, with an intensely bitter root, which is the officinal portion. The powder is tonic in doses of ten grains.

Tincture of Aletris.

℞. Aletris root, bruised, three ounces.
Diluted Alcohol, two pints.

Make tincture by displacement. Dose, half an ounce to an ounce in colic, and in smaller doses in chronic rheumatism.

ALLIUM.

Garlic.

Several species of *Allium* have been employed in medicine, but the most important, and that recognized by the Pharmacopœia, is *A. sativum*. Linn. Griffith, Med. Bot. 653. The part used is the bulb, which is composed of several bulblets or *cloves* (*spicæ*), surrounded by a dry, white, thin capsular membrane. These cloves have a peculiar odor, and an acrid and pungent taste. The properties depend on the presence of a volatile oil, and are lost on drying.
Sex. Syst. Hex. monog. *Nat. Syst.* Liliaceæ.
Garlic is a stimulating expectorant; diuretic and diaphoretic when given internally, and acts as an irritant, or even vesicant, when applied externally. The dose in substance is from half a drachm to a drachm, or more.

Syrup of Garlic.

℞. Garlic, sliced and bruised, six troyounces.
Diluted acetic acid, one pint.
Sugar, twenty-four troyounces.

Macerate the garlic in ten ounces of acid, in a glass vessel for four days, and express. Then add remainder of acid to dregs, and again express. Add sugar and form syrup.
U. S. Ph.

As an expectorant in chronic catarrhs, well suited for children. Dose, for a child, about a teaspoonful.

Cataplasm of Garlic.

Bruised cloves of garlic, mixed with common bread and milk poultice, in different proportions. Used as a revulsive, but less active than the mustard cataplasm.

Liniment of Garlic.

℞. Garlic,
Lard, equal parts.

To be well rubbed together. Has been recommended as a revulsive in infantile nervous and convulsive disorders. *Gassicourt.*

Capillary Lotion.

℞. Garlic, three or four cloves.
Alcohol, two pints.

Macerate for thirty-six hours, filter, and add of

Burdock, eight ounces.

The head to be sponged with this every evening, for some weeks. It is said to be efficient to promote the growth of hair.
Phœbus.

ALOE.

ALOES.

Under this name are included the inspissated juices of several species of Aloe, and especially of *A. vulgaris*, *A. socotrina*, and *A. spicata*.

Sex. Syst. Hexandria monogynia. *Nat. Syst.* Liliaceæ.

Pereira, Mat. Med., ii. 113. Griffith, Med. Bot., 649.

Three varieties of aloes are found in the shops, the Cape, Socotrine, and Barbadoes. The second, when genuine, is the most esteemed, but the first is by far the most abundant, and, when good, answers every purpose for which the drug is used.

U. S. Dis., art. Aloe.

Purified Aloes.

℞. Socotrine aloes, twenty-four troyounces.
Stronger alcohol, four fl. ounces.

Melt the aloes by means of a water-bath, add the alcohol, mix and strain through a fine hair sieve, previously moistened with boiling water. Evaporate until it becomes brittle on cooling. *U. S. Ph.*

Powder of Aloes.

℞. Aloes, six grains.
White sugar, one drachm.

Pulverize very finely. Recommended to be blown in the eye, to remove films and specks on the cornea. *Radius.*

Powder of Aloes and Canella.

℞. Socotrine aloes in fine powder, twelve troyounces.
Canella powder, three troyounces.

Mix. Dose, five to fifteen grains. A popular emmenagogue, known as *Hiera Picra*. *U. S. Ph.*

Compound Powder of Aloes.

℞. Aloes, an ounce and a half.
Guaiacum resin, one ounce.
Compound powder of cinnamon, half an ounce.

Powder the aloes and resin separately, and then mix them with the compound powder of cinnamon. Dose, ten to twenty grains. Used as a purgative and diaphoretic.

Lond. Ph.

Emmenagogue Powder.

℞. Iron rust, six grains.
Powdered aloes, two grains.
Magnesia, thirty grains.

Mix. For a single dose, to be repeated three times a day. *Brera.*

Aloes Pills.

℞. Powdered Socotrine aloes,
" soap, each, forty-eight grains.

Form a mass with water, to be divided into twenty-four pills. Dose, one to three as a laxative, five or more as a purgative.

U. S. Ph.

Brit. Ph. directs confection of roses for one-half of the soap, and adds some volatile oil of nutmeg; pills of Barbadoes aloes are made by the same formula, using oil of caraway in place of oil of nutmeg.

Paris Codex directs two parts of Cape aloes to one of confection of roses, to be made into pills weighing 0.15 gramme

Compound Pills of Aloes.

℞. Powdered aloes, half a drachm.
" rhubarb, one drachm.
Oil of cloves, four drops.
Soap, eight grains.
Syrup of rhubarb, sufficient.

Rub well together, and form forty pills. In tardy menstruation, one at night or oftener if required, so as to open bowels but not to purge. *Dewees.*

℞. Powdered aloes, one ounce.
Extract of gentian, half an ounce.
Oil of caraway, forty minims.
Molasses, sufficient.

Beat together till incorporated. *Lond. Ph.*

Dose, five to fifteen grains. A valuable purgative in habitual costiveness.

Aloes and Assafœtida Pills.

℞. Powdered Socotrine aloes, Assafœtida, Soap, in powder, } each, thirty-two grains.

Beat with water to form a mass; divide into twenty-four pills. Dose, two to five. Useful in costiveness with flatulency.

U. S. Ph.

℞. Socotrine aloes, in powder, Assafœtida, Hard soap, in powder, Confection of roses, } each, one ounce.

Beat together until thoroughly mixed. Dose, five to ten grains. *Brit. Ph.*

Aloes and Myrrh Pills.

℞. Purified aloes, in fine powder, forty-eight grains.
Myrrh, in fine powder, twenty-four grains.
Aromatic powder, twelve grains.
Syrup, sufficient.

Beat together, to form a mass; divide into twenty-four pills. *U. S. Ph.*

Dose, from three to six. A well-known cathartic and emmenagogue, under the name of Rufus's pills.

℞. Socotrine aloes, two ounces.
Myrrh, one ounce.
Saffron, dried, half an ounce.
Confection of rose, two ounces and a half.

Reduce the first three articles to powder, and beat with the confection into a uniform mass. Dose, five to ten grains. *Brit. Ph.*

Aloes and Iron Pills.

℞. Powdered aloes,
Exsiccated sulphate of iron, each, equal parts.

Mix, and with alcohol form pills, each weighing 0.1 gramme. Known as black Italian pills. *Ph. Germ.*

℞. Barbadoes aloes, powdered, two ounces.
Sulphate of iron, one ounce and a half.
Comp. cinnamon powder, three ounces.
Conserve of roses, four ounces.

Pulverize the sulphate of iron, mix the whole ingredients, and beat into a uniform mass. Dose, five to ten grains. *Brit. Ph.*

A useful emmenagogue in chlorosis and atonic amenorrhœa.

Chapman's Aperient Pills.

℞. Aloes, sixteen grains.
Powdered rhubarb, twenty-four grains.
Mastic, twelve grains.

Mix, and make twelve pills. *Chapman.*

Chapman's Anti-Dyspeptic Pills.

℞. Aloes, half a drachm.
Powdered ipecacuanha, ten grains.
Mastic, thirty grains.
Oil of fennel, eight drops.

Mix, and make twenty pills. *Chapman.*

Mitchell's Aperient Pills.

℞. Aloes, sixteen grains.
Powdered rhubarb, thirty-two grains.
Calomel, two grains.
Tartar emetic, one grain.

Mix, and make sixteen pills. *J. K. Mitchell.*

Two or three pills act as an aperient.

Hooper's Pills.

℞. Aloes, four hundred parts.
Crystallized sulphate of iron, two hundred parts.
Extract of black hellebore, Myrrh, Soap, each, one hundred parts.
Powdered canella,
Powdered ginger, each, fifty parts.

Beat into a mass with water, and divide into pills of two and a half grains.

Much used as a cathartic and an emmenagogue. *Journ. Phil. Coll. Pharm.*, v. 25.

Anderson's Pills.

℞. Aloes, seven hundred and eighty-seven parts.
Soap, one hundred and thirty-one parts.
Colocynth,
Gamboge, each, thirty-three parts.
Oil of aniseed, sixteen parts.

Reduce the aloes, colocynth, and gamboge to a very fine powder, add oil of aniseed and soap, and beat into a mass with water; divide into three grain pills. A mild purgative. *Journ. Phil. Coll. Pharm.*, v. 25.

Pills of Aloes and Mastic.

℞. Socotrine aloes, forty-eight grains.
Mastic,
Red rose-leaves, each, twelve grains.

Beat with water into a uniform mass, and divide into twenty-four pills. Known as Lady Webster's dinner pills, and used as a laxative in costiveness dependent on impaired digestion. Dose, one to three. *U. S. Ph.*

Morrison's Pills.

No. 1. ℞. Aloes,
Cream of tartar, equal parts.
Mucilage, sufficient to form mass.

No. 2. ℞ Aloes, three parts.
Gamboge, two parts.
Colocynth, one part.
Cream of tartar, four parts.
Powder finely, and add
Simple syrup, sufficient
to form mass. Dose, five to ten grains. These purge actively, especially No. 2. *Cooley.*

Fuller's Pills.

℞ Aloes, half a drachm.
Senna,
Myrrh, each, one scruple.
Assafetida,
Galbanum, each, ten grains.
Saffron,
Mace, each, five grains.
Sulphate of iron, two scruples.
Simple syrup, sufficient
to form mass. Dose, five to fifteen grains, used as an antispasmodic and aperient. *Cooley.*

James's Analeptic Pills.

℞ Antimonial powder,
Resin of guaiacum,
Aloes and myrrh pill, equal parts.
Syrup, sufficient.
Form a mass, and divide into four grain pills. A diaphoretic purgative. *Cooley.*

Peters's Pills.

℞ Aloes,
Jalap,
Scammony,
Gamboge, each, two drachms.
Calomel, one drachm.
Beat into a mass with alcohol. A powerful purgative. Three pills, containing three grains each, constitute a full dose. *Cooley.*

Speediman's Pills.

℞ Aloes,
Myrrh,
Rhubarb, each, one ounce.
Extract of chamomile, half an ounce.
Beat into a mass with syrup, and divide into four grain pills. A good tonic and stomachic purge. *Burnett.*

Splenetic Pills.

℞ Strained aloes,
Gum ammoniac, each, an ounce and a half.
Myrrh,
Bryony, each, two drachms.
Beat into a mass, and divide into four grain pills. Dose, three to five. Extolled in amenorrhœa and hypochondriasis. *Saunders.*

Duchesne's Pills.

℞ Aloes,
Gum ammoniac, each, twenty-four grains.
Myrrh, six grains.
Mastic,
Carbonate of potassium, each, two grains.
Saffron, one grain.
Simple syrup, sufficient
to make a mass. Dose, from ten to twenty grains. Prescribed in engorgements of the abdominal viscera, supervening on intermittent fevers. *Van Mons.*

Stahl's Aperient Pills.

℞ Powdered aloes, forty grains.
Extract of colocynth, twenty grains.
Powdered iron, ten grains.
Syrup, sufficient
to form mass. Divide into forty pills and roll in powdered cinnamon. Dose one or two at bedtime.

Antichlorotic Pills.

℞ Aloes,
Iron rust, each, half a drachm.
Gum ammoniac, one drachm.
Extract of dandelion, sufficient
to form mass. Divide into pills of three grains each. Dose, three to six, morning and evening, in chlorosis and amenorrhœa. *Radius.*

Bicker's Pills.

℞ Iron rust, two drachms.
Sulphur,
Myrrh, each, one drachm.
Aloes,
Beef gall, sufficient
to form mass. Divide into four grain pills. Six, morning and evening. *Radius.*

Whytt's Pills.

℞ Chloride of iron,
Aloes,
Extract of horehound, each, half a drachm.
Assafetida, one drachm and a half.

Form a mass. Divide into two grain pills. Dose, four to five, three times a day, in leucorrhœa and hysteria with constipation. *Radius.*

Barthez's Pills.

℞ Aloes, half a drachm.
Myrrh, one drachm.
Musk, twenty grains.
Camphor, ten grains.
Balsam Peru, sufficient

to form mass. Dose, eight grains, three times a day. Advised in amenorrhœa and chlorosis. *Pierquin.*

Pitschaft's Eccoprotic Pills.

℞ Strained aloes,
Sulphate of quinia,
each, one scruple.

Mix, and divide into twenty pills. Dose, one at bedtime. Found useful in torpor of the large intestines. *Radius.*

Frank's Pills.

℞ Aloes,
Jalap, each, four parts.
Rhubarb, one part.
Syrup of wormwood, sufficient

to form mass. Divide into three grain pills. Dose, one to four during the day.

These are the *Grains de Santé*, so much employed as dinner pills in Europe. *Foy.*

Aloes and Rhubarb Pills.

℞ Powdered aloes,
Rhubarb, each, half a drachm.
Soap, sufficient

to form mass. Divide into twenty-five pills. Three or four occasionally in dyspepsia with costiveness. *Ellis.*

Aperient Pills.

℞ Aloes,
Rhubarb, each, one drachm.
Ipecacuanha, six grains.
Soap, one scruple.

Form mass with water, and divide into sixty pills. Dose, one at bedtime. as an aperient; two or three as a purgative. *Ellis.*

Pills of Aloes and Blue Mass.

℞ Blue mass, one scruple.
Powdered aloes, twenty-five grains.

Incorporate, and divide into fifteen pills. Dose, one every two hours till they operate. Useful in constipation where there is a deficiency of bile. *Ellis.*

Laxative Electuary.

℞ Aloes, eight grains.
Cream of tartar, two drachms.
Honey, sufficient

to form electuary. For a single dose. Advised in amenorrhœa attributed to abdominal engorgement. *Brera.*

Extract of Aloes.

℞ Powdered aloes, one part.
Distilled water, four parts.

Macerate for two days with occasional agitation, strain, evaporate to dryness and pulverize. *Ph. Germ.*

℞ Socotrine aloes in fragments, one pound.
Boiling distilled water, ten pounds.

Macerate for twelve hours, decant, strain, and evaporate. An extract of Barbadoes aloes is prepared by the same process. Dose, two to six grains. *Brit. Ph.*

Extract of Aloes with Sulphuric Acid.

℞ Extract of aloes, one troyounce.
Distilled water, four fl. ounces.

Dissolve and add gradually

Pure sulphuric acid, sixty grains.

Evaporate in a procelain capsule to dryness. *Ph. Germ.*

Pills of Extract of Aloes.

℞ Extract of aloes, thirty grains.
Extract of nux vomica, six grains.
Extract of hyoscyamus, twenty grains.
Powdered ipecacuanha, one grain.

Make twenty pills. Dose, one at night in habitual constipation.—*Pilulæ salutis.* *Van Buren.*

Anthelmintic Suppository.

℞ Aloes, half an ounce.
Common salt, three drachms.
Flour, two ounces.
Honey, sufficient

to form a firm paste, to be divided into twelve suppositories. Used in cases of ascarides. *Foy.*

Compound Decoction of Aloes.

℞. Extract of Socotrine aloes, one hundred and twenty grains.
Carbonate of potassium, sixty grains.
Myrrh,
Saffron, each, ninety grains.
Extract of liquorice, one ounce.
Compound tincture of cardamom, eight fl. ounces.
Distilled water, sufficient.

Rub the dry ingredients, except the saffron, together, boil gently for five minutes with a pint (imperial) of distilled water, add the saffron, cool, add the tincture, macerate for two hours, filter through flannel, and wash the strainer with distilled water o obtain thirty fl. ounces. Dose, half a fl. ounce to two fl. ounces. A mild cathartic, tonic, antacid, and emmenagogue. *Brit. Ph.*

Clauder's Elixir.

℞. Carbonate of potassium, Chloride of ammonium, each, one ounce.
Elder-flower water, a pint and a half.

Make a solution, and add

Strained aloes,
Myrrh, each, one ounce.
Saffron, two drachms.

Digest for twenty-four hours, and filter. Dose, half a drachm to a drachm. Has been recommended in obstructions of the abdominal viscera, in amenorrhœa, constipation, scurvy, etc. *Pideret.*

Enema of Aloes.

℞. Aloes, forty grains.
Carbonate of potassium, fifteen grains.
Mucilage of starch, ten fl. ounces.

Mix and rub together. *Brit. Ph.*

Detersive Injection.

℞. Strained aloes, ten grains.
Chloride of ammonium, four grains.
Honey of roses, one ounce.
Fennel water, six ounces.

Make solution, and filter. Stated to be useful in chronic discharges from the urethra, to be injected three or four times a day. *Soubeiran.*

Anthelmintic Clyster.

℞. Powdered aloes, one drachm.
Barley water, one pint.

Mix. Very effectual against ascarides in the rectum. *Radius.*

Aloetic Mixture.

℞. Strained aloes,
Myrrh, each, one drachm.
Cream of tartar, half an ounce.
Myrrh water, six ounces.

Make a solution, and filter. Dose, a tablespoonful night and morning, to provoke hemorrhoids. *Foy.*

Alkaline Mixture of Aloes.

℞. Aloes, two ounces and a half.
Bicarbonate of sodium, six ounces.
Compound spirit of lavender, two fl. ounces.
Water, four pints.

Mix. Macerate for two weeks, and filter. Dose, from one fl. drachm to one fl. ounce, half an hour after meals, for persons of a costive habit. *Mettauer.*

Wine of Aloes.

℞. Socotrine aloes, in powder, one troyounce.
Cardamom, in powder,
Ginger, in powder, each, sixty grains.
Sherry wine, one pint.

Macerate for seven days, occasionally agitating, then filter. *U. S. Ph.*

This wine of *Brit. Ph.* is three-fifths the strength of the above.

Purgative, in doses of half an ounce to two ounces; stomachic and tonic, in doses of one to two drachms.

Alkaline Wine of Aloes.

℞. Aloes, Myrrh, Saffron, each, one ounce.
Carbonate of potassium, two ounces.
Wine, two pints.

Digest for ten days, and filter. Bitter, tonic, and stimulant. Recommended in dyspepsia with pyrosis, in doses of an ounce. *Swediaur.*

Balsamic Wine of Aloes.

℞. Aloes, Myrrh, Olibanum, Angelica, each, half an ounce.
Balsam Peru, one ounce.

Storax, two ounces.
Benzoin, three ounces.
Flowers of hyperi-
cum, four handfuls.
Wine, four pints.

Macerate for fourteen days, and strain. Dose half an ounce.

Tincture of Aloes.

℞. Powdered Socotrine
aloes, one troyounce.
Liquorice, three troyounces.
Alcohol, half a pint.
Distilled water, one pint and
a half.

Macerate seven days, and filter. Dose, one drachm to an ounce. Purgative and stomachic. *U. S. Ph.*

The tincture of *Brit. Ph.* is rather less than two-thirds, the strength of the preceding, but is made with proof spirit.

℞. Cape aloes, one part.
Alcohol, 60 per ct. five parts.

Macerate for eight days and filter.
Paris Codex and *Ph. Germ.*

Dose, ten drops to one drachm.

Compound Tincture of Aloes.

℞. Aloes, nine parts.
Gentian, Rhubarb, Zedoary, Saffron, Agaric, each, cut and bruised, one part.
Alcohol (sp. gr. .892), two
hundred parts.

Digest for a week and filter. *Ph. Germ.*

Dose, half to one drachm. Much used in Europe under the name of *elixir of life.*

Tincture of Aloes and Myrrh.

℞. Socotrine aloes,
Myrrh, each, in powder,
No. 50, three troyounces.
Alcohol, sufficient.

Obtain by displacement two pints.
U. S. Ph.

The pharmacopœia for 1850 directed one troyounce of saffron in addition to above.

℞. Aloes,
Myrrh, each, in coarse
powder, two parts.
Powdered saffron, one part.
Alcohol, twenty-four parts.
Diluted sulphuric acid, two parts.

Macerate for eight days and filter.
Ph. Germ.

Long celebrated under the name of *elixir proprietatis Paracelsi.* It is purgative, stomachic, and emmenagogue. The dose is half a drachm to a drachm. Well suited to cold, torpid habits.

Ethereal Tincture of Aloes.

℞. Myrrh, one ounce and a half.
Spirit of sulphuric
ether, one pound.

Digest for four days, and add

Aloes, one ounce and a half.
Saffron, one ounce.

Again digest for four days, and filter.
Edin. Ph. 1817.

This tincture has been highly esteemed as stomachic, vermifuge, and emmenagogue, in doses of half a drachm to a drachm.

Boerhaave's Elixir.

℞. Aloes, Myrrh, Saffron, each, one ounce.
Tartrate of potassium, two ounces.
Alcohol, fourteen ounces.
Distilled water, eight ounces.

Macerate for three days, and filter.
Han. Ph.

This has been highly praised in visceral obstructions. The dose is from half a drachm to a drachm.

Stoughton's Elixir.

℞. Aloes,
Cascarilla, each, one drachm.
Rhubarb, four drachms.
Wormwood, Germander, Gentian, Orange peel, each, six drachms.
Alcohol, two pints.

Macerate for four days, and filter. *Foy.*

Stimulant, tonic, and stomachic, in doses of twenty or thirty drops.

Spirit of Garus.

℞. Saffron, Socotrine aloes, Cloves, each, one hundred grains.
Myrrh, forty grains.
Cinnamon, four hundred grains.
Nutmeg, two hundred grains.

Alcohol (sp. gr. 0.864), sixteen pints.

Macerate for four days, filter, add three pints of water, and distil sixteen pints.

Paris Codex.

This is used only for preparing the following.

Elixir of Garus.

℞ Spirit of garus, three pints.
Vanilla, twenty grains.
Saffron, ten grains.

Macerate for two days and strain. Prepare an infusion of

Maidenhair, four hundred grains.
Boiling water, twenty fl. ounces.

Express, strain, and add

Sugar, forty troyounces.

Make a syrup and mix it with the above spirit, and with

Orange-flower water, eight ounces.

Paris Codex.

This preparation is an agreeable liquor, which is used in medicine mainly as a vehicle.

Suppositories of Aloes.

℞ Purified aloes in powder, No. 80, sixty grains.
Oil of theobroma, three hundred grains.

Make twelve suppositories. *U. S. Ph.*

As a purgative and for seat-worms.

Ointment of Aloes.

℞ Powdered aloes, two drachms.
Lard, one ounce.

Triturate well.

Has been recommended as a friction to the abdomen as a vermifuge in children.

Soubeiran.

ALTHÆA.

Marsh Mallow.

Several species of Mallow are employed in medicine, but that which is officinal is *A. officinalis*, a herbaceous perennial, with pale purplish flowers, a native of Europe, in moist situations.

Sex. Syst. Monadelph. Polyand. *Nat. Syst.* Malvaceæ.

Linn. Sp. Pl. 966. Griffith, Med. Bot. 161.

The parts used are the roots and leaves. These are inodorous, and have a vapid mucilaginous taste. They are much employed in Europe as demulcent and emollient, but their place is supplied in this country by other articles.

Decoction of Marsh Mallow.

℞ Marsh mallow root, dried, four ounces.
Raisins, stoned, two ounces.
Boiling water, five pints.

Boil down to three pints. Strain, and set aside until the dregs have subsided, and decant. *Ed. Ph.*

A good demulcent drink.

Syrup of Marsh Mallow.

℞ Marsh mallow root, fifty parts.
Cold water, three hundred parts.

Macerate for twelve hours, strain without expression, and add

Syrup, fifteen hundred parts.

Evaporate to the proper consistence, and strain. *Codex.*

℞ Marsh mallow root, one part.

Wash with cold water and macerate for two hours in

Cold water, twenty parts.

Strain without expression, and in fifteen parts of the colature dissolve

Sugar, twenty-four parts.

A good demulcent. Much used in France and Germany. *Ph. Germ.*

Pectoral Species.—Pectoral Tea.

℞ Marsh mallow root, eight parts.
Liquorice root, three parts.
Orris root, one part.
Coltsfoot leaves, four parts.
Mullein flowers,
Star anise, each, two parts.

Mix the articles, previously cut.

Ph. Germ.

Pectoral Tea with Fruit.

℞ Pectoral species, sixteen parts.
St. John's bread, cut, six parts.
Pearl barley, four parts.
Figs, cut, three parts.

Mix. *Ph. Germ.*

The above are popular remedies for colds, etc., in Europe.

Marsh Mallow Paste.

The paste formerly made of one part each of powdered marsh mallow root and wheat flour, and two parts of sugar, is no

longer used; in its place, but under the same name, the equally efficient gum paste is officinal. *See* pages 84 and 85.

Marsh Mallow Lozenges.

℞ Marsh mallow root, ten parts.
Water, forty parts.

Boil, strain and evaporate the decoction to nine parts; then add

Tragacanth, one part.

To form a mucilage; incorporate with

Sugar, one hundred parts.

Form into lozenges of fifteen grains each. *Paris Codex.*

Marsh Mallow Ointment.

Ointments containing concentrated decoctions of marsh mallow and other mucilaginous drugs, are inelegant preparations, and their use is discontinued. In their stead the following ointments are officinal under the above title, though not containing any marsh mallow.

℞ Resin, one part.
Yellow wax, two parts.

Melt together and add

Common turpentine, one part.
Oleo-infusion of fenugreek, eight parts.

Mix. *Paris Codex.*

℞ Powdered turmeric, one part.
Lard, fifty parts.

Digest for half an hour, and add

Yellow wax,
Resin, each, three parts.

Melt together and strain. *Ph. Germ.*

Powder of Marsh Mallow.

℞ Powdered mallow root,
" liquorice root, each, three ounces.
" nitre, half an ounce.
" camphor, one drachm.

Mix, and divide into thirty powders; one to be taken three times a day. *Foy.*

ALUMINA.

Alumina.

The hydrate of aluminium is found naturally in an impure state in the form of different clays, boles, etc., and can be prepared in a pure state by the decomposition of alum.

Hydrate of Aluminium.

℞ Alum, ten parts.
Carbonate of sodium, nine parts.
Distilled water, sufficient.

Dissolve the salts separately each in eighty parts of hot water, mix the solutions, wash the precipitate well, express, dry, and powder. *Ph. Germ.*

Used externally as an absorbent and astringent.

Rust's Astringent.

℞ Armenian bole,
Carbonate of magnesium,
White sugar, each, two drachms.
Oil of mace, two drops.
Rhubarb, one drachm.

Mix, and triturate well. *Radius.*

Dose, a teaspoonful three times a day, in chronic gonorrhœa, vaginal and uterine catarrh, and slight menorrhagia.

Electuary for the Teeth.

℞ White bole, an ounce and a half.
Gum lac, half an ounce.
Cinnamon, a drachm and a half.
Syrup of pinks, sufficient

to form soft paste. Triturate well together and keep in closed boxes. Used as a dentifrice, but is also beneficial in scorbutic gums. *Swediaur.*

ALUMINII ACETAS.

Acetate of Aluminium.

℞ Alum, a sufficient quantity.

Dissolve in water, precipitate by means of aqua ammoniæ, filter, and dissolve the moist precipitate in acetic acid; again filter, and evaporate.

This has been recommended diluted with water in chronic diarrhœa, and mixed with syrup of poppies in slight cases of hemoptysis. Dose, three to five grains. *Van Mons.*

ALUMINII SULPHAS.

Sulphate of Aluminium.

℞ Alum,
Carbonate of sodium,
each, four troyounces.
Sulphuric acid, six hundred and thirty grains.
Water, sufficient.

Dissolve the salts each in six fl. ounces of water, pour the alum into the soda solution, and digest until carbonic acid ceases to be

given off. Collect the precipitate, wash it well, dissolve in the acid previously diluted with half a pint of water, filter and evaporate finally in a water-bath until a dry salt remains. *U. S. Ph.*

It is deliquescent, and has strongly astringent properties.

Detergent Wash.

℞ Sulphate of aluminium, two drachms.
Water, half a pint.

Mix. As a wash to foul ulcers. *Pennypacker.*

M. Gannal has found that a solution of this salt, made with about a pound to the quart of water, will preserve a body fresh for a long time, if injected into the blood-vessels; where it is only wished to preserve the body for a month or six weeks, an enema of one quart, and an injection of about a quart into the œsophagus, are sufficient. *Dunglison, N. R.*

ALUMEN.

Alum.

The *U. S. Ph.* recognizes the sulphate of aluminium and ammonium, and also the sulphate of aluminium and potassium. Most of the foreign pharmacopœias employ the latter only. All commercial varieties of alum contain more or less sulphate of iron. Most of that used in this country is of domestic manufacture.

Alum is employed both internally and externally as an astringent, in doses of ten grains to a scruple or more.

Burnt Alum.

℞ Alum in coarse powder, four troyounces.

Heat to not above 400° until the residue weighs two and a quarter troyounces; then rub into powder. *U. S. Ph.*

This gives a loss of water equal to nearly forty-four per cent. *Brit. Ph.* continues the heat until the loss amounts to forty-seven per cent.

Astringent, and a mild escharotic. It is much used to repress the growth of exuberant granulations or proud flesh. Dose, five to ten grains.

Powder of Alum.

℞ Alum, one drachm.
Gum Arabic, half a drachm.

Triturate, and divide into four powders, one to be taken every three hours in atonic hemorrhage. *Radius.*

℞ Alum, a drachm and a half.
Catechu, one drachm.
Armenian bole, one ounce.

Triturate well. To arrest hemorrhages. Dose, a teaspoonful. *Van Mons.*

℞ Alum, four ounces.
Kino, one ounce.

Triturate well. This is the *Saccharine Alum* of the continental writers. Dose, ten to twenty grains, in hemorrhages or diarrhœa. *Ed. Ph.*

℞ Alum, thirty grains.
Powdered opium, three grains.

Mix, and make six powders, one to be taken every four hours. *A. T. Thomson.*

℞ Alum, one drachm.
Powdered opium, four grains.
" cinnamon, one scruple.

Mix and triturate, divide into four powders, one to be taken every four hours, in menorrhagia or in diarrhœa. *Radius.*

℞ Alum, two drachms.
Powdered opium, three grains.
" kino, one scruple.
Sugar of milk, one drachm.

Mix, triturate, and divide into six powders. One to be taken every three hours, in fluxes. *Phœbus.*

Alum Errhine.

℞ Alum,
Armenian bole, each, one drachm.
Kino, half a drachm.
Red oxide of iron, two drachms.

Mix, and triturate. As an errhine in epistaxis. *Radius.*

Boluses of Alum.

℞ Alum,
Extract of Peruvian bark,
Nutmeg, each, half a scruple.
Simple syrup, sufficient

to make a bolus. Prescribed in uterine and other hemorrhages, and repeated as may be required. *Ellis.*

℞ Alum, five grains.
Extract of rhatany, eighteen grains.
Conserve of roses, half a drachm.
Syrup of rhatany, sufficient

to make ten boluses. Dose, one every three or four hours. *Foy.*

Alum Pills.

℞. Alum, six grains.
Extract of opium, one grain.
Catechu, six grains.

Mix, and form into six pills. One to be given every two to four hours. In passive hemorrhages and atonic mucous discharges. *Ellis.*

℞. Alum, two drachms.
Kino,
Honey of roses, each, one drachm.

Make pills, of six grains each. Dose, one to six a day, in passive hemorrhages. *Foy.*

℞. Alum,
Extract of Peruvian bark,
Chloride of iron and ammonium,
Aromatic powder, each, a drachm and a half.
Oil of cinnamon, twelve drops.

Mix, and make pills of two grains. Dose, four to six, morning and evening, in passive hemorrhages and mucous discharges. *Augustin.*

Astringent Pills of Alum.

℞. Alum,
Catechu, equal parts.
Extract of gentian, sufficient

to make pills of two grains each. Dose, four every three hours. Useful in diarrhœa, and especially in leucorrhœa. *Radius.*

Pills of Alum and Benzoic Acid.

℞. Alum, one scruple.
Benzoic acid, five grains.
Gum Arabic,
White sugar, each, ten grains.

Mix, with sufficient water to form thirty-five pills, to be taken in two days. Have been thought useful in phthisis pulmonalis. *Augustin.*

Electuaries of Alum.

℞. Alum, one drachm.
Catechu,
Extract of Peruvian bark, each, two drachms.
Conserve of roses, six drachms.
Simple syrup, sufficient

to make an electuary. Dose, one drachm every four hours. In chronic diarrhœa, leucorrhœa, and passive hemorrhages. *St. Marie.*

℞. Alum, one drachm.
Extract of logwood, half an ounce.
Balsam Peru, six drops.
Water of sage, sufficient.

Make an electuary. Astringent and antiseptic. Recommended in sponginess of the gums. *Phœbus.*

Alum Collyrium.

℞. Alum, twelve to twenty grains.
Rose water, four fl. ounces.

Dissolve. As an application in chronic ophthalmia. *Ellis.*

Alum Curd.

℞. Powdered alum, half a drachm.
White of egg, one.

Agitate well till a coagulum is formed. To be applied on a rag to inflamed eyes. To be removed when it becomes warm. *Ellis.*

Pagliari's Hæmostatic Mixture.

℞. Benzoin in tears, one hundred grains.
Stronger alcohol, half a troyounce.

Dissolve, and add

Water, ten troyounces.
Alum, one troyounce.

Boil until clear, cool, and filter. *De Meyer.*

Used as a powerful hæmostatic, and for the preservation of animal matters, by immersing and afterwards drying them.

Odontalgic Solution of Alum.

℞. Finely powdered alum, two drachms.
Spirit of nitric ether, seven fluidrachms.

Dissolve. Stated to be an almost infallible cure for toothache. *Blake.*

Solutions of Alum.

℞. Alum, one drachm.
Sulphate of zinc, half a drachm.
Borax, four grains.
Rose water, six ounces.

Dissolve. Used as an astringent in bruises, slight hemorrhages, and mucous discharges. *Cadet de Gassicourt.*

℞. Alum, half a drachm.
Armenian bole, six drachms.
Vinegar,
Red wine, each, half an ounce.

Mix the powdered bole in the solution of

the alum in the vinegar, and add the wine. Used as a local application in epistaxis. *Swediaur.*

Gargles of Alum.

℞. Alum,
Nitrate of potassium, each, three ounces.
Cream of tartar, four ounces.
Acetic acid, four pounds.

Dissolve, evaporate to dryness, and powder the residuum. Half an ounce, dissolved in eight ounces of water, forms a gargle which has been highly praised in inflammation of the fauces and tonsils. *Wirtem. Ph.*

℞. Alum, two drachms.
Water, four fl. ounces.

Dissolve. Said to be useful where the breath is offensive. *Cavarra.*

℞. Alum, one drachm.
Wine, one pound.
Tincture of bark, four fl. drachms.
" myrrh, two fl. drachms.
Honey of roses, two ounces.
Laudanum, one fl. scruple.

Mix. As a gargle in scurvy of the gums. *Foy.*

℞. Alum, one drachm.
Infusion of red roses,
Barley water, each, three fluidounces.

Add to the solution

Honey of roses, two fl. ounces. *Ratier.*

℞. Powdered oak-bark, one ounce.
Boiling water, a pint and a half.

Evaporate to one pint, filter, and add

Alum, half a drachm.
Brandy, two fl. ounces.

Used as a gargle in inflammation of the mouth and throat. *Augustin.*

Injections of Alum.

℞. Alum, one drachm.
Rose water, two fl. ounces.

Mix. In chronic gonorrhœa. *Foy.*

℞. Alum,
Sulphate of iron, each, twelve grains.
Honey of roses, one ounce.
Barley water, five fl. ounces.

Mix. In chronic gonorrhœa. *Radius.*

℞. Stramonium leaves, half an ounce.
Boiling water, two pints.

Infuse for half an hour, strain, and add to infusion

Alum, two drachms, to an ounce.

In cancerous affections of uterus. *Foy.*

Alum Injection.

℞. Infusion of flaxseed, fifteen fluidounces.
Alum, two drachms.
Tincture of kino, one ounce.

Mix. As an injection in cauliflower excrescence of the uterus. *Clarke.*

Julep of Alum.

℞. Alum, two drachms.
Sulphuric acid, ten drops.
Essence of citron, six drops.
Syrup of lemon, two fl. ounces.
Water, three fl. ounces.

Mix. A tablespoonful every hour, in lead colic. *Radius.*

Alum Liniment.

℞. Alum, half an ounce.
Whites of eggs, four.
Spirit of camphor, two ounces.

Mix. As an application to bed sores. *Augustin.*

Lotions of Alum.

℞. Alum,
Sulphate of zinc, each, two drachms.
Plantain water, two pints.

Mix. As a wash to wounds and bleeding ulcers. *Cadet de Gassicourt.*

℞. Alum, three drachms.
Chloride of ammonium, one drachm.
Liquid hydrosulphuric acid, one scruple.
Rose water, half a pint.

Mix. As a wash, in obstinate cutaneous affections. *Alibert.*

Alum Whey.

℞. Boiling milk, one pint.
Powdered alum, a drachm and a half.

Mix, separate the curd, and add to the whey

White sugar, one ounce.

Dissolve. In passive hemorrhages. A wineglassful occasionally, to be taken cold. *Foy.*

Aromatic Alum Whey.

℞. Powdered alum, one drachm.
Sugar of milk, half a drachm.
Powdered cinnamon, fifteen grains.
Cow's milk, a pint and a half.

Boil and strain after coagulation. To be taken in cupful doses, cold, in hemorrhages. *Niemann.*

Alum Draughts.

℞. Alum, one to two drachms.
Syrup of gum, two ounces.
Distilled water, four fl. ounces.

Mix. Dose, a wineglassful every six hours, in lead colic and uterine hemorrhages. *Guibourt.*

℞. Alum, two drachms.
Wine, four fl. ounces.
Gum tragacanth,
Catechu, each, a drachm.
Water, eight fl. ounces.

Mix. One or two spoonfuls every hour in lead colic. *Radius.*

Anglo-Saxon Ointment.

℞. Red lead,
Olive oil, } each, one pound.
White wax,
Powdered amber,
Burnt alum, } each, two drachms.
Camphor,

Heat the oil until it becomes of a reddish-brown color, add the red lead and continue the heat; when the mass has the consistence of a plaster, add the amber, and finally, when it cools, the alum and camphor. Highly spoken of as a dressing to foul ulcers. *Niemann.*

Ointment for Chilblains.

℞. Sweet almonds, blanched, half a pound.
Honey, six ounces.
Camphor,
Flour of mustard, } each,
Burnt alum, } two ounces.
Olibanum,
Yolks of eggs, three.

Triturate well. This paste is to be thinned in a little water, and rubbed on the inflamed parts night and morning, and then washed off in tepid water, and afterward the parts well dried with a linen cloth. *Swediaur.*

Rust's Ointment.

℞. Alum, a drachm and a half.
Camphor,
Opium, each, a scruple to half a drachm.
Balsam Peru, one drachm.
Lead ointment, half an ounce.

Triturate well together. Found useful as an application to frosted limbs. *Phœbus.*

Pile Ointment.

℞. Powdered alum, four scruples.
Simple cerate, five ounces and a half.

Mix, and triturate well. As an application to painful hemorrhoids. *Taddei.*

AMMONIACUM.

Ammoniac.

This gum-resin is found in the shops, either in whitish or yellowish tears, or in yellowish or brownish masses. It has an unpleasant odor, and a nauseous and somewhat bitter taste. It is the product of *Dorema ammoniacum*, Don.

Pereira, Mat. Med. ii. 489. Griffith, Med. Bot. 325, 331.

Its effects on the system are somewhat like those of assafetida, and appear to be most marked on the bronchial mucous membrane. It also is considered to be emmenagogue. The dose is from six to twelve grains. It is employed externally as a resolvent.

Purified Ammoniac.

℞. Ammoniac, in small pieces, three parts.
Water, two parts.

Digest in a tared capsule until the gum-resin is completely divided, add sufficient stronger alcohol to form with the water of the emulsion a menstruum of sixty per ct. alcoholic strength; boil for a minute, strain with expression through a moderately coarse muslin, and evaporate by means of a water-bath to the proper consistence. *Paris Codex.*

Ammoniac Pills.

℞. Ammoniac, one drachm.
Syrup of gum. sufficient
to make thirty-six pills. *Soubeiran.*

℞. Ammoniac,
Myrrh, each, two drachms.
Extract of horehound, one drachm.
" liquorice, three drachms.

Mix. Make two grain pills. Dose, four to ten every three hours. *Augustin.*

℞. Ammoniac, one ounce.
Sagapenum, two ounces.
Elixir proprietatis, sufficient
to make four grain pills. As a remedy in obstructed menstruation. *Bories.*

℞. Ammoniac, two drachms.
Soap, one drachm.
Oil of juniper, twenty drops.
Mix, and form pills of two grains. *Augustin.*

Klein's Pills.

℞. Ammoniac,
Extract of centaury, each, half an ounce.
Soap, one ounce.
Oil of amber, ten drops.
Triturate, and make pills of two grains. *Spielman.*

Pills of Ammoniac and Rhubarb.

℞. Ammoniac, Soap, Rhubarb, each, two drachms.
Triturate, and make with water three grain pills. Dose, two pills, three to four times a day. *Tissot.*

Compound Ammoniac Pill.

℞. Ammoniac, one drachm.
Blue pill, fifteen grains.
Powdered squill, six grains.
Simple syrup, sufficient.
Mix, and make sixteen pills. One, three times a day, in asthmatic cough with hepatic derangement. *Ainslie.*

De Haen's Pills.

℞. Ammoniac,
Pil. aloes and myrrh, each, one drachm.
Soap,
Extract of conium, each, a drachm and a half.
Triturate, and form into three grain pills. Dose, four a day, in chlorosis and amenorrhœa. *St. Marie.*

Ammoniac Mixture.

℞. Ammoniac, two drachms.
Water, half a pint.
Rub the ammoniac with the water gradually added, until they are thoroughly mixed. *U. S. Ph.*

The dose is from one to two tablespoonfuls.

Compound Ammoniac Mixture.

℞. Ammoniac, one drachm.
Distilled water, four fl. ounces.
Make a mixture, and add
Oxymel of squills, two fl. ounces.
Paregoric elixir, half a fl. ounce.
Mix. A tablespoonful every two hours, as a stimulating expectorant. *Ellis.*

℞. Ammoniac mixture, five fl. ounces.
Oxymel of squills, half a fl. ounce.
Antimonial wine, twenty-six minims.
Distilled vinegar, three fl. drachms.
Mix. A tablespoonful occasionally in cough, or humoral asthma. *Ainslie.*

℞. Ammoniac, Assafetida, Soap, Powdered valerian, Flowers of arnica, each, two drachms.
Tartar emetic, eighteen grains.
Mix, and make two grain pills. In doses of four or five, three times a day. In amaurosis, arising from abdominal affections. *Richter.*

Ammoniac and Nitric Acid Mixture.

℞. Ammoniac, two and a half scruples.
Diluted nitric acid, two fl. drachms.
Water, eight fl. ounces.
Add the acid to the water, then gradually rub the gum with the acid compound, in a composition mortar.
A tablespoonful, two or three times a day It is highly beneficial in chronic catarrh, especially in that of elderly persons. *Ellis.*

Mixtures of Ammoniac.

℞. Ammoniac mixture, three fl. ounces.
Tincture of castor, half a fl. drachm.
Syrup of tolu, half a fl. ounce.
Laudanum, twenty to thirty drops.
Cinnamon water, one fl. ounce.
Mix. A dessertspoonful every three or four hours in troublesome cough. *Meigs.*

℞. Ammoniac,
Gum Arabic, each, half an ounce.
Infusion of hyssop, six fl. ounces.

Syrup of capillaire (maidenhair), two fl. ounces.

Rub the ammoniac and gum with the infusion until a solution is formed.

In tablespoonful doses, occasionally, in catarrhs. *Radius.*

℞ Ammoniac mixture, four fl. ounces.
Wine of ammoniac,
Paregoric elixir, each, half a fl. ounce.
Syrup of tolu, one fl. ounce.

Mix. In teaspoonful doses, occasionally, as an expectorant.

Ammoniac Plaster.

℞ Ammoniac, five troyounces.
Diluted acetic acid, half a pint.

Dissolve the ammoniac in the acid, and strain; evaporate in a water-bath to a proper consistence. *U. S. Ph.*

Useful as an application to indolent and scrofulous tumors to promote suppuration.

℞ Yellow wax,
Resin, each, four parts.

Melt together, strain, and add

Purified ammoniac, eight parts,

previously dissolved in

Common turpentine, four parts.

Mix. *Paris Codex.*

The ammoniac plaster of the German Pharmacopœia is identical with this, except that two parts of the ammoniac are replaced by two parts of galbanum.

Plaster of Ammoniac with Mercury.

℞ Ammoniac, twelve troyounces.
Mercury, three troyounces.
Olive oil, sixty grains.
Sulphur, eight grains.

To the heated oil add the sulphur gradually, stirring constantly, then rub the mercury with the compound, until the globules disappear. Boil the ammoniac with sufficient water to cover it, until they are thoroughly mixed, strain through a hair sieve, evaporate by means of a water-bath until it would harden on cooling, and while still hot, incorporate it thoroughly with the mixture containing the mercury. *U. S. Ph.*

More active than the simple ammoniac plaster. Used as a discutient to tumid glands and other indolent swellings, especially syphilitic. Sometimes salivates.

Ammoniac Plaster with Hemlock.

℞ Strained ammoniac, three ounces.
Extract of hemlock, two drachms.

Melt, and add

Solution of subacetate of lead, one drachm.

Stir till cold. *Ph. Chem.*

AMMONIUM.

Ammonium.

Under ordinary circumstances, ammonia exists as a gas, which is readily taken up by water or alcohol. Water absorbs nearly 800 times its volume of the gas at 32° F., and this solution, possessing the properties of the gas, is usually employed.

Water of Ammonia.

℞ Chloride of ammonium,
Lime, each, twelve troyounces.
Distilled water, one pint.
Water, six pints.

Pour a pint of water upon the lime in a proper vessel, and after it has slaked, stir to a smooth paste, add the remaining water, stir, decant from the gritty sediment into a two-gallon glass retort and add the chloride of ammonium. Place the retort on a sand-bath, and adapt to it a washing bottle connected by means of a glass tube with a quart bottle containing the distilled water and cooled by ice-cold water. Apply heat, and continue as long as ammonia comes over. Remove the fluid in the bottle, and add so much water as will raise it to the sp. gr. 0.960, and keep in small well-closed bottles. The *aqua ammon. fort.* of the Pharmacopœia has a sp. gr. of 0.900 and the above *aqua ammoniæ* that of 0.960; two fl. ounces of the former with three of water will form the latter. *U. S. Ph.*

The strong solution of ammonia of *Brit. Ph.* has the sp. gr. 0.891.

Liniment of Ammonia.

℞ Water of ammonia, one fl. ounce.
Olive oil, two troyounces.

Mix. Used as a rubefacient and counter-irritant. *U. S. Ph.*

℞ Water of ammonia, one fl. ounce.
Olive oil, three fl. ounces.

Mix. *Brit. Ph.*

Compound Liniment of Ammonia.

℞ Stronger water of ammonia, five fl. ounces.
Tincture of camphor, two fl. ounces.
Spirit of rosemary, one fl. ounce.

Mix well. More powerful than the simple liniments. *Edin. Ph.*

Granville's Lotion.

(Milder.)

℞ Water of ammonia (.882), four fl. drachms.
Spirit of rosemary, three fl. drachms.
Spirit of camphor (℥j to Oj), one fl. drachm.

Mix.

(Stronger.)

℞ Water of ammonia (.882), five fl. drachms.
Spirit of rosemary, two fl. drachms.
Spirit of camphor, one fl. drachm.

Mix. As a counter-irritant. *Gray.*

Compound Tincture of Ammonia.

℞ Mastic, two drachms.
Alcohol, nine fl. drachms.
Oil of lavender, fourteen minims.
Stronger water of ammonia, one pint.

Dissolve the mastic in the alcohol, and filter; add the other ingredients, and agitate them well.

Well known under the name of *eau de luce* as a remedy in bites of venomous reptiles. It is a good antispasmodic, in doses of from ten to forty drops; and also forms a stimulating embrocation. *Lond. Ph.* 1836.

Gargle of Ammonia.

℞ Water of ammonia (.960), half fl. ounce.

To be added to a strained decoction of

Mallows,
Dry figs, each, six drachms.
Cow's milk, sixteen ounces.

Employed as a resolvent in certain cases of angina. *Pringle.*

Injection of Ammonia.

℞ Water of ammonia, one scruple.
Cow's milk, one ounce.

Mix. As an emmenagogue this injection is to be used three times a day. It induces a mucous flow, often followed by the appearance of the catamenia. It must be used with great caution, and made less stimulating at first. *Lavagna.*

Mixture of Ammonia.

℞ Water of ammonia,
Carbonate of potassium, each, two drachms.
Cinnamon water, four fl. ounces.

Mix. A spoonful every two or three hours, in cardialgia and acidity of the stomach. *Jourdan.*

℞ Comp. tinct. of ammonia (*Lond.*), two fl. drachms and a half.
Camphor water, seven fl. ounces.
Tincture of castor, one fl. drachm.
Simple syrup, three fl. drachms.

Mix. Two spoonfuls in an hysteric attack. *Ainslie.*

Mixture of Ammonia and Ether.

℞ Water of ammonia,
Sulphuric ether, each, two fl. drachms.
Peppermint water, four fl. ounces.
Syrup of cinnamon, one fl. ounce.

Mix. A spoonful every hour. Said to be very useful in bites of venomous snakes. *Radius.*

Ammoniacal Sinapism.

℞ Flour of mustard, one ounce and a half.
Rye flour, half an ounce.
Water of ammonia, sufficient

to form a cataplasm. This is more active than the simple mustard poultice. *Phœbus.*

Gondret's Ammoniacal Ointment.

℞ Suet,
Hog's lard, each, one part.
Stronger water of ammonia, two parts.

Melt the fats and incorporate the ammonia. *Soubeiran.*

℞ Hog's lard, seven drachms.
Oil of almonds, one drachm and a half.
Stronger water of ammonia, five drachms.

Melt the lard, mix it with the oil, pour into a wide-mouthed bottle with a glass stopper, add the ammonia, and agitate well. Keep in a cool place.

Rubbed on the skin it causes rubefaction, and if covered with a compress, speedily vesicates. A useful rubefacient and counter-irritant. *Gondret.*

Lotion of Ammonia.

℞. Water of ammonia,
Spirit of thyme,
Spirit of camphor, equal parts.

Mix. As a lotion to the forehead, or applied to the temples, in compresses, in sick headache. *Swediaur.*

Fetid Spirit of Ammonia.

℞. Assafetida, in small pieces, one ounce and a half.

Macerate for twenty-four hours in fifteen fl. ounces of rectified spirit, then distil off the spirit, and mix the product with

Strong solution of ammonia, two fl. ounces.

Add alcohol to make twenty fl. ounces. *Brit. Ph.*

Employed as a stimulant and antispasmodic in doses of half a drachm to one drachm.

Steer's Opodeldoc.

℞. Alcohol, eight pints.
Soap, twenty ounces.
Water of ammonia, four fl. ounces.
Camphor, eight ounces.
Oil of rosemary,
" monarda, each, one fl. ounce.

Dissolve the soap in the alcohol with a gentle heat, add the other articles, suffer the impurities to subside, and pour into phials whilst warm. *Phil. Coll. Pharm.*

Liquid Opodeldoc.

℞. Dry Spanish soap, sixty parts.
Camphor, fifteen parts.
Alcohol, five hundred parts.
Oil of thyme, four parts.
" rosemary, three parts.
Solution of ammonia, thirty parts.

Mix, dissolve, and filter. *Giseke.*

Plaster of Ammonia.

℞. Stronger water of ammonia, one ounce.
Camphor, two ounces.
Opium, fifteen grains.
Ammoniac, Saffron, Gum plaster, Galbanum plaster, each, half an ounce.

Mix well. For corns. A thick layer of this plaster is to be spread on a piece of linen or kid-skin, of the exact size of the corn, as it will blister the sound skin. *La Foret.*

Sulphuretted Ammoniacal Liniment.

℞. Water of ammonia, one ounce.
Camphor, half a drachm.
Sulphuret of potassium, four drachms.
Olive oil, six ounces.

Mix. Recommended as an application in tinea capitis. *Bories.*

Terebinthinate Ammoniacal Liniment.

℞. Oil of chamomile, " henbane, Essence of turpentine, each, two fl. ounces.
Water of ammonia,
Tincture of capsicum, each, one ounce.
Camphor, half an ounce.

Mix well. A very stimulating liniment, found beneficial in asthenic gout and chronic rheumatism. *Ammon.*

Spirit of Ammonia.

℞. Alcohol, twenty fl. ounces.
Chloride of ammonium,
Lime, each, twelve troyounces.
Water, six pints.

Prepare as directed for water of ammonia. *U. S. Ph.*

Aromatic Spirit of Ammonia.

℞. Carbonate of ammonium, one troyounce.
Water of ammonia, three fl. ounces.
Oil of lemon, two fl. drachms and a half.
Oil of nutmeg, forty minims.
" lavender, fifteen minims.
Alcohol, a pint and a half.
Water, sufficient.

Dissolve the carbonate in the water of ammonia, previously mixed with four fl. ounces of water. Dissolve the oils in the alcohol, mix the two solutions, and add water sufficient to make two pints. *U. S. Ph.*

The corresponding spirit of *Brit. Ph.* is nearly one-fourth stronger in ammonia than the preceding.

Mixture of Ammoniated Alcohol.

℞. Ammoniated alcohol (spirit of ammonia), half a fl. ounce.
Oil of amber, one drop.
" mace, two drops.
" aniseed, } each, three
" cloves, } drops.
" cinnamon, }

Mix. Dose, ten to thirty drops in sweetened gum-water, in anorexia and flatus. This is similar to the aromatic ammoniated alcohol of *U. S. Ph.* 1830. *Ammon.*

Anisated Ammoniated Alcohol.

℞. Alcohol, twenty-four parts.
Oil of aniseed, one part.

Dissolve, and gradually add, constantly stirring,

Water of ammonia, five parts.

Keep in well-closed bottles. *Ph. Germ.*

Lotion in Hiccough.

℞. Anisated ammoniated alcohol, one fl. drachm.
Spirit of lavender, two fl. ounces.

Recommended by Siebold to be rubbed on the thorax and abdomen of infants to check hiccough. *Radius.*

Elixir of Liquorice. (Pectoral Elixir.)

℞. Purified extract of liquorice, two parts.
Fennel-water, six parts.
Anisated ammoniated alcohol, two parts.

Dissolve. Dose, ten minims to a teaspoonful, diluted, as a stimulating expectorant. *Ph. Germ.*

Mixture of Anisated Ammoniated Alcohol.

℞. Extract of liquorice, one drachm.
Barley-water, three fl. ounces and a half.
Anisated ammoniated alcohol, half a fl. drachm.
Simple syrup, half a fl. ounce.

Mix. A teaspoonful occasionally in chronic catarrh. *Hufeland.*

℞. Anisated ammoniated alcohol, one fl. drachm.
Syrup of mallows, one fl. ounce.
Extract of henbane, one scruple.

Mix well. A dessertspoonful three times a day, in chronic bronchitis or in the second stages of whooping-cough. *Radius.*

Vicat's Anodyne Mixture.

℞. Ammoniated alcohol, half a fl. ounce.
Diluted alcohol, one fl. ounce.
Opium, two scruples.
Camphor, one scruple.

Digest for three days, often stirring, and filter. Used on cotton to fill the cavity of carious teeth, and as a lotion to the temples in headache. *Spielmann.*

AMMONII ACETAS.

Acetate of Ammonium.

Solution of Acetate of Ammonium.

℞. Diluted acetic acid, two pints.
Carbonate of ammonium, a sufficient quantity.

Add the carbonate gradually to the acid, until the latter is neutralized, and filter. *U. S. Ph.*

The corresponding preparation of *Brit. Ph.* is about one-third, of *Paris Codex* twice, and of *Ph. Germ.* about three times stronger than the above.

The solution of *U. S. Ph.* may also be prepared by dissolving six hundred and forty grains of carbonate of ammonium in sufficient water to make one pint, and adding it to a mixture of four fl. ounces of officinal acetic acid and twelve fl. ounces of water.

A valuable diaphoretic in febrile and inflammatory diseases, when aided by warmth; otherwise it acts as a diuretic. Dose, half a fl. ounce to a fl. ounce every three or four hours. It is also a good refrigerant lotion. It is known as the *spirit of Mindererus.*

Cataplasm with Acetate of Ammonium.

℞. Extract of hemlock, one ounce.
" henbane, half an ounce.
Powder of belladonna, one drachm.
Solution of acetate of ammonium, sufficient

to form a cataplasm. Has been found useful in ulcerated cancerous sores. *Radius.*

Collyrium of Acetate of Ammonium.

℞. Solution of acetate of ammonium,
Rose water, equal parts.

In chronic ophthalmia. *Saunders.*

Gargle of Acetate of Ammonium.

℞. Solution of acetate of ammonium, Honey of roses, each, one fl. ounce.
Elder-water, eight fl. ounces.

Mix. Recommended by Wendt in scarlatina anginosa with ulcerations. *Phœbus.*

Mixture of Acetate of Ammonium.

℞. Solution of acetate of ammonium, two fl. ounces.
Cinnamon-water, one fl. ounce.
Antimonial wine, one fl. drachm.
Distilled water, two fl. ounces.

Mix. A tablespoonful every two or three hours. *Ellis.*

℞. Camphor mixture,
Solution of acetate of ammonium, each, half a fl. ounce.
Antimonial wine,
Laudanum, each, twenty drops.

Mix. To be taken at bedtime, or oftener, in which latter case the laudanum to be diminished. *Ellis.*

℞. Liquid acetate of ammonium, half fl. ounce.
Camphor mixture, seven fl. drachms.
Antimonial wine, fifteen drops.
Syrup of saffron, half a fl. drachm.

Mix. To be taken three times a day. *Burke.*

AMMONII ARSENIAS.

ARSENIATE OF AMMONIUM.

℞. Arsenic acid, one ounce.
Stronger water of ammonia, sufficient

to saturate the acid. To be left to evaporate and crystallize spontaneously. Dose, $\frac{1}{20}$th to $\frac{1}{12}$th of a grain. *Cottereau.*

Solution of Arseniate of Ammonium.

℞. Arseniate of ammonium, eight grains.
Water, eight ounces.
Angelica-water, four drachms.

Mix. Has been recommended, in doses of twenty to thirty drops, in obstinate cutaneous affections. *Soubeiran.*

AMMONII BENZOAS.

BENZOATE OF AMMONIUM.

℞. Benzoic acid, two troyounces.
Water of ammonia, three fl. ounces and a half.
Distilled water, four fl. ounces.

Dissolve the acid in the mixed liquids, evaporate with a gentle heat, maintain an alkaline reaction by adding ammonia, if necessary, and crystallize. *U. S. Ph.*

Used as a diuretic and stimulant to the mucous membrane of the urinary passages and preferred to benzoic acid on account of its solubility. Dose, ten to twenty grains.

AMMONII BICARBONAS.

BICARBONATE OF AMMONIUM.

℞. Sesquicarbonate of ammonium, at will.

Pulverize, spread out on paper, and expose to the air for twenty-four hours. Then inclose in well-stopped bottles. *Dub. Ph.*

This is a white powder of less disagreeable taste than the common carbonate. It is used for the same purposes. Dose, five to fifteen grains.

AMMONII BROMIDUM.

BROMIDE OF AMMONIUM.

℞. Bromine, two troyounces.
Iron wire, cut, one troyounce.
Water of ammonia, four fl. ounces and a half.
Distilled water, sufficient.

Add the iron and then the bromine to half a pint of distilled water, and agitate until the liquid has assumed a greenish color. To this bromide of iron add the water of ammonia, previously diluted with half a pint of distilled water, agitate the mixture, and heat it in a water-bath for half an hour. Filter, wash the precipitate with distilled water, and evaporate the filtrate in a porcelain capsule until a pellicle forms, then stir constantly at a moderate heat until the salt becomes dry and granular. *U. S. Ph.*

The salt becomes yellow on exposure; it is readily soluble in water and sparingly so in alcohol. It acts as an absorbent in glandular enlargements, and in large doses as an anodyne and hypnotic, increasing the secretions.

℞. Bromide of potassium, four troyounces.
Sulphate of ammonium, three troyounces.

Dissolve the bromide in six, and the sulphate in four and a half fl. ounces of boiling water, mix, cool, and add one fl. ounce

and a half of alcohol; after twenty-four hours decant and evaporate to crystallization. This will keep better than that made by the officinal process. *Ch. Rice.*

AMMONII CARBONAS.

CARBONATE OF AMMONIUM.

℞ Chloride of ammonium, one pound.
Dried chalk, one pound and a half.

Pulverize them separately, then mix them thoroughly, and sublime into a cooled receiver. *U. S. Ph.* 1850.

Aromatic Carbonate of Ammonium.

℞ Carbonate of ammonium, one pound.
Oil of lavender, three ounces.
" verbena, half an ounce.

Grind together and sublime with a gentle heat.

℞ Carbonate of ammonium, half an ounce.
Oil of peppermint,
" cajeput, each, twelve drops.

Mix, and keep in a closed bottle. *Phœbus.*

℞ Powdered carbonate of ammonium, one ounce.
Stronger solution of ammonia, half a fl. ounce.
Oil of rosemary,
" bergamot, each, ten drops.

Mix, and while moist, put in a wide-mouthed bottle, which is to be well closed.

All these are used as smelling salts in faintness, etc.

Potion of Carbonate of Ammonium.

℞ Carbonate of ammonium, ten grains.
Cinnamon water, one fl. ounce.
Tincture of allspice, half a fluidrachm.
Syrup of saffron, half a fl. ounce.

Mix. To be taken before going to bed. *Phœbus.*

Pills of Carbonate of Ammonium.

℞ Carbonate of ammonium, Powdered capsicum, " cloves, " mace, each, one scruple.
Oil of caraway, five drops.
Extract of gentian, twelve grains.
Simple syrup, sufficient to form twenty pills. One every two hours in gout in the stomach. *Parrish.*

Mixture of Carbonate of Ammonium.

℞ Carbonate of ammonium, Powdered white sugar, Powdered gum Arabic, each, one drachm and a half.
Compound spirit of lavender, two fl. drachms.
Mint water, four fl. ounces.

Mix. A tablespoonful every two or three hours. If required, forty to fifty drops of laudanum may be added to the mixture. *Ellis.*

Useful in low states of the system.

Solution of Carbonate of Ammonium.

℞ Carbonate of ammonium, one part.
Distilled water, five parts.

Dissolve. Dose, twenty to sixty grains. *Ph. Germ.*

Draught with Carbonate of Ammonium.

℞ Oil of valerian, three drops.
Carbonate of ammonium, ten grains.
Cinnamon water, two fl. ounces.

Mix. To be taken every four hours, in depression of the spirits and nervous headache. *Ellis.*

Mixture of Carbonate of Ammonium and Ginger.

℞ Powdered ginger, fifteen grains.
Carbonate of ammonium, eight grains.
Spirit of cinnamon, two fluidrachms.
Water, one and a half fl. ounces.

Mix. To be taken in gout or cramp in the stomach. *Ellis.*

Drops of Carbonate of Ammonium.

℞ Carbonate of ammonium, twenty parts.
Oil of lavender, one part.
Alcohol, four parts.

Distil. Dose, thirty or forty drops in nervous headache. *Cottereau.*

Plaster of Carbonate of Ammonium.

℞. Carbonate of ammonium, fifteen grains.
Opium, each, half a drachm.
Camphor, twenty drops.
Oil of cajeput, half an ounce.
Galbanum plaster,

Mix. Said to be useful as an application to the pit of the stomach to arrest vomiting in sea-sickness. *Phœbus.*

Camphorated Ammoniacal Liniment.

℞. Liquid carbonate of ammonium, four parts.
Oil of olives, sixteen parts.
Spirit of camphor, three parts.

Mix. As a revulsive embrocation. *Swediaur.*

Ammoniacal Ointment.

℞. Carbonate of ammonium, one drachm.
Rose ointment, one ounce.
Oil of jasmine, four drops.

Mix. Recommended as a friction, three or four times a day, in engorgements of the mammæ, and used by Foy in frictions to the throat in croup. *Augustin.*

Pyro-oleous Carbonate of Ammonium.

℞. Carbonate of ammonium, thirty-two parts.
Dippel's animal oil, one part.

Rub together into a uniform powder. *Ph. Germ.*

In typhus, paralysis, etc. Dose, two to five grains.

Solution of Pyro-oleous Carbonate of Ammonium.

℞. Pyro-oleous carbonate of ammonium, one part.
Distilled water, five parts.

Dissolve and filter. *Ph. Germ.*

Dose, ten to thirty grains.

AMMONII CHLORIDUM.

SAL AMMONIAC.

Purified Chloride of Ammonium.

℞. Chloride of ammonium, in small pieces, twenty troyounces.
Water of ammonia, five fl. drachms.
Water two pints.

Dissolve the chloride in the water in a porcelain dish with the aid of heat, add the ammonia, filter after some time, evaporate and granulate. *U. S. Ph.*

Stimulating and resolvent. Dose, five to thirty grains.

Powder of Sal Ammoniac.

℞. Sal ammoniac, two drachms.
Camphor, six grains.
Powdered arnica, half a drachm.
White sugar, six drachms.

Mix. Dose, a teaspoonful, three or four times a day. Said to be efficacious as an emmenagogue, and also in smaller doses in chronic catarrh. *Radius.*

Bolus of Sal Ammoniac.

℞. Sal ammoniac,
Extract of liquorice, each, one scruple.
Extract of taraxacum, sufficient

to form a bolus. One to be taken every three or four hours, in scirrhus of the prostate, bladder, and rectum. *Radius.*

Lotions of Sal Ammoniac.

℞. Sal ammoniac, two scruples.
Vinegar, one fl. ounce.
Water, one pint.

Mix. *Augustin.*

℞. Sal ammoniac, one ounce.
Vinegar,
Alcohol, each, four fl. ounces.

Mix. In strains, bruises, and external inflammation. *Foy.*

℞. Chloride of ammonium, one drm.
Alum, three drachms.
Sulphuret of potassium, one scruple.
Rose water, eight fl. ounces.

Dissolve. In acne simplex. *Waring.*

Fomentations of Sal Ammoniac.

℞. Powdered bistort,
" pomegranate root, each, two ounces.
Red wine, one pound.

Heat, digest for an hour, strain, and add

Sal ammoniac, two drachms.

Useful as a fomentation, in strains and bruises. *Foy.*

℞. Sal ammoniac, one ounce.
Spirit of rosemary, one pound.

Mix. Said to be useful in engorgement of the mammæ. The breast to be covered with cloths dipped in the fluid. *Foy.*

Collyrium of Sal Ammoniac.

℞. Chloride of ammonium, forty grains.
Acetate of copper, four grains.
Lime water, four fl. ounces.

Mix. In white opacity of the cornea. *Scarpa.*

Liniment with Sal Ammoniac.

℞. Sal ammoniac, one ounce.
Camphor, half an ounce.
White soap, six drachms.
Alcohol, two pounds.

Digest, and filter. Useful as an application to contusions. *Niemann.*

Collutorium of Sal Ammoniac.

℞. Pellitory, two drachms.
Lavender water,
Vinegar, each, two fl. ounces.
Opium, two grains.
Sal ammoniac, one drachm.

Macerate for a few days, and filter. *Cadet de Gassicourt.*

Draught of Sal Ammoniac.

℞. Sal ammoniac, five grains.
Camphor, three grains.
Gum Arabic, one drachm.
Parsley water, four fl. ounces.

Mix. To be taken every two hours in paralytic retention of urine. *Radius.*

Cataplasm with Sal Ammoniac.

℞. Sal ammoniac,
Henbane, each, half an ounce.
Linseed meal, an ounce and a half.
Boiling water, sufficient

to make a cataplasm. Advised in an engorgement of milk in the breasts. *Radius.*

Wash of Sal Ammoniac.

℞. Bran, an ounce and a half.
Mallow leaves, six drachms.
Water, sufficient

to make sixteen ounces of solution. Boil, strain, and add to decoction

Sal ammoniac, two drachms.
Tincture of benzoin, half a fl. ounce.

Radius.

Emulsion of Sal Ammoniac.

℞. Sweet almonds, one ounce.
Orange-flower water, two fl. ounces.
Rose water, eight fl. ounces.
Sal ammoniac, one drachm.
Tincture of benzoin, two fl. drachms.

Rub down the almonds, previously blanched, with the rose water, and add the other articles. Dose, a tablespoonful. *Phœbus.*

Mixture of Sal Ammoniac.

℞. Chloride of ammonium,
Extract of liquorice, each, two drachms.
Linden flower water, six fl. ounces.

Mix. A tablespoonful every two hours, in catarrh. *Richter.*

AMMONII CITRAS.

Citrate of Ammonium.

℞. Fresh lemon juice, one fl. ounce.
Carbonate of ammonium, sufficient

to saturate.

White sugar, one drachm.
Distilled water, four fl. ounces.

Mix.

A pleasant saline diaphoretic in febrile disorders, resembling the solution of the acetate of ammonium in its effects. Dose, a tablespoonful, as may be required. *Ellis.*

Solution of Citrate of Ammonium.

℞. Citric acid, three ounces.
Water, twenty ounces.
Stronger solution of ammonia, sufficient.

Dissolve the acid in the water, and add ammonia until neutral to test paper. Dose, two to six fl. drachms. *Brit. Ph.*

AMMONII IODIDUM.

Iodide of Ammonium.

℞. Iodide of potassium, three troyounces.
Sulphate of ammonium, one troyounce.
Boiling distilled water, two fl. ounces.

Powder the salts separately, mix them, dissolve in the water, and cool; add a fl.

ounce of alcohol and cool to about 40°, filter through moist cotton and wash the salt with a fl. ounce of a mixture containing two parts of water and one part of alcohol, then evaporate the solution rapidly to dryness and granulate. *U. S. Ph.*

Tonic and antisyphilitic. Dose, one to five grains.

Glycerite of Iodide of Ammonium.

℞. Iodide of ammonium, thirty grains.
Glycerin, half a fl. ounce.

Dissolve. In enlarged tonsils.
Richardson.

Liniment of Iodide of Ammonium.

℞. Iodide of ammonium, five grains.
Olive oil, one fl. ounce.

Mix. In nocturnal syphilitic pains.
Gamberini.

Ointment of Iodide of Ammonium.

℞. Iodide of ammonium, one scruple.
Lard, one ounce.

Mix. *Beasley.*

℞. Iodide of ammonium, one drachm.
Lard, one ounce.

Mix. *Gibert.*

As an application to scrofulous tumors and cutaneous affections.

AMMONII NITRAS.

Nitrate of Ammonium.

℞. Diluted nitric acid, at will.
Carbonate of ammonium, sufficient

to saturate. Evaporate by a gentle heat, till a pellicle forms; set aside to crystallize. *Pereira.*

Soluble in two parts of cold water. In doses of one or two scruples, it reduces the frequency of the pulse and heat of the skin, and also acts as a diuretic.

Mixture of Nitrate of Ammonium.

℞. Carbonate of ammonium, one scruple.
Nitric acid, sufficient

to saturate; add

Syrup of mallows, one fl. ounce.
Distilled water, two fl. ounces.

Dose, a dessertspoonful, every two hours.
Radius.

AMMONII PHOSPHAS.

Phosphate of Ammonium.

℞. Diluted phosphoric acid, at will.
Strong water of ammonia, sufficient.

Add the ammonia until the solution is slightly alkaline, evaporate and crystallize, maintaining the alkaline reaction of the liquid.

Diuretic and discutient. Recommended by Dr. Buckler, of Baltimore, in gout and rheumatism, as a solvent of uric acid calculus, and in diseases dependent on a lithic acid diathesis. Dose, five to twenty grains three times a day.

Solution of Phosphate of Ammonium.

℞. Phosphate of ammonium, half an ounce.
Water, six fl. ounces.

Dissolve. Dose, a tablespoonful three times a day. *C. Ellis.*

Effervescing Draught of Phosphate of Ammonium.

℞. Phosphate of ammonium,
Carbonate of ammonium, each, ten grains.
Aromatic spirit of ammonia, half a fl. drachm.
Water, one fl. ounce.

Mix. To be taken thrice daily, with the juice of a lemon, in diabetes. *Basham.*

AMMONII SUCCINAS.

Succinate of Ammonium.

℞. Succinic acid, one part.
Water, four parts.

Put in a capsule, and add sufficient water of ammonia, till perfectly saturated, with a slight excess of alkali; filter, evaporate, and crystallize. *Guibourt.*

Solution of Succinate of Ammonium.

℞. Succinic acid, in powder, one part.
Distilled water, eight parts.
Pyro-oleous carbonate of ammonium, one part or sufficient.

Dissolve the acid in the water, neutralize with the carbonate, and filter. *Ph. Germ.*

Antispasmodic and sudorific. Dose, twenty to sixty drops.

Spirit of Succinate of Ammonium.

℞. Spirit of hartshorn, two fl. ounces.
Sal ammoniac, four ounces.
Carbonate of potassium, twelve ounces.
Powdered amber, six ounces.
Oil of lemons, two fl. drachms.

Mix the sal ammoniac, oil, and amber, add the carbonate of potassium to three pints of alcohol, mixed with a pint of water, and distil on a sand-bath. Dose, thirty to fifty drops, as an antispasmodic. *Niemann.*

Mixture of Succinate of Ammonium.

℞. Liquid succinate of ammonium,
Elixir of liquorice, each, two parts.
Wine of opium,
Antimonial wine, each, one part.

Mix. Useful in hooping-cough, in doses of ten to forty drops, every two hours. *Augustin.*

Succinate of Ammonium and Ether.

℞. Liquid succinate of ammonium,
Sulphuric ether, equal parts.

Mix. Much praised in gout and rheumatism. Dose, twenty to forty drops in sugar and water, two or three times a day. *St. Marie.*

Mixture of Succinate of Ammonium.

℞. Liquid succinate of ammonium, five fl. drachms.
Tincture of castor,
Anisated ammon. alcohol, each, three fl. drachms.
Tincture of mace, two fl. drachms.
" nutmeg, one fl. drachm.

Mix. Fifteen to twenty-five drops, three or four times a day, in hysteria. *Augustin.*

Liniment of Succinate of Ammonium.

℞. Liquid succinate of ammonium, one fl. ounce.
Camphorated oil, two fl. ounces.

Mix. As a liniment to the neck in angina. *St. Marie.*

℞. Camphor, two scruples.
Oil of turpentine, two drachms.

Dissolve, and add

Soft soap, one ounce.
Ointment of bayberries, two drachms.
Succinate of ammonium, fifteen grains.

Mix. As a friction in chronic rheumatism, especially sciatica. *Cadet.*

AMMONII SULPHAS.

Sulphate of Ammonium.

℞. Diluted sulphuric acid, at will.
Carbonate of ammonium, sufficient

to saturate; filter, and crystallize. *Soubeiran.*

Laxative and stimulant. Dose, from a scruple to half a drachm.

AMMONII SULPHURETUM.

Sulphide of Ammonium.

℞. Water of ammonia, four fl. ounces.

Pass hydrosulphuric acid (obtained from the sulphuret of iron, and sulphuric acid diluted with four times its weight of water) through the water of ammonia in a suitable apparatus, to perfect saturation. To be kept in a well-stopped bottle. Sp. gr. 0.999. *Dub. Ph.*

A powerful sedative, lessening the action of the circulatory system to a great degree, and causing nausea, vomiting, vertigo, etc.

Used in diabetes to check the morbid appetite, by Cruikshank, Rollo, and others. Dose, five or six drops, in a tumblerful of water, three or four times a day, gradually increasing the dose until some vertigo is induced.

Sulphuretted Sulphide of Ammonium.

℞. Quicklime,
Sulphur, each, three parts.

Triturate together, adding water sufficient to form a paste, and incorporate

Sulphate of ammonium, seven parts

dissolved in water. Let stand, decant, wash the residuum, rubbing it with a small portion of water, unite the solutions, and filter. *Van Mons.*

Known as *Boyle's fuming liquor*, and recommended in venereal complaints, in phthisis, rheumatism, and gout, in doses of three to four drops in water, augmenting the dose until vertigo ensues.

Wilkinson's Liniment.

℞. Boyle's fuming liquor, ten grains.
Chalk, one scruple.

Flowers of sulphur, Lard, Tar, } each, half an ounce.

Mix well. Advised in chronic diseases of the skin. To be rubbed on a moderate extent of surface at a time. *Phœbus.*

Sulphuretted Syrup.

℞. Boyle's fuming liquor, three drachms.
Sulphuret of antimony and sodium, one drachm.
Simple syrup, an ounce and a half.

Mix. Has been prescribed in croup, in the dose of a teaspoonful every hour. *Swediaur.*

AMMONII VALERIANAS.

Valerianate of Ammonium.

From a mixture of chloride of ammonium in coarse powder, and an equal weight of recently slaked lime, obtain gaseous ammonia; pass this first through a bottle filled with pieces of lime and afterwards into officinal valerianic acid, contained in a tall narrow glass vessel, until the acid is neutralized. Let crystallize, drain, and dry the crystals on bibulous paper. *U. S. Ph.*

Used in neuralgia, hysteria, epilepsy and similar affections. Dose, two to eight grains, dissolved in water and flavored with an aromatic and syrup.

Elixir of Valerianate of Ammonium.

℞. Valerianic acid, one fl. ounce.
Distilled water, twenty-four fl. ounces.
Carbonate of ammonium, sufficient.
Alcohol,
Simple syrup, each, twelve fl. ounces.
Peach water, eight fl. ounces.
Saturated tincture of fresh orange peel, one fl. ounce.
Oil of bitter almonds, five minims.
Oil of sweet orange, twenty minims.

Mix the acid and water and neutralize with the carbonate; dissolve the oils in the alcohol, mix the solutions, add the other ingredients, and color with caramel. *Maryland Coll. Ph.*

A tablespoonful contains five grains of the salt.

AMYGDALA.

Almonds.

AMYGDALA AMARA.

Bitter Almonds.

AMYGDALA DULCIS.

Sweet Almonds.

The almond-tree, *Amygdalus communis*, is about the size and much resembles the peach-tree in appearance. It is a native of Persia and Syria, and is extensively cultivated in the southern parts of Europe. There are several varieties, the most important of which are the sweet and the bitter: the former having a sweet, bland kernel; and the latter, one that has the bitter taste of the peach kernel.

Sex. Syst. Icosand., monog. *Nat. Syst.* Amygdalaceæ.

Linn. Sp. Pl. 677. Griffith, Med. Bot. 284.

Sweet almonds act as a demulcent; but the bitter have some of the properties of hydrocyanic acid.

Butter of Almonds.

℞. Blanched almonds, ten drachms.
White sugar, twelve drachms.
Orange-flower water, two drachms.

Triturate till reduced to a homogeneous paste. *Guibourt.*

A spoonful, stirred in a tumbler of water, forms an extemporaneous syrup of orgeat, which latter preparation is difficult to preserve.

Almond Paste.

℞. Blanched almonds, eight ounces.
Oil of almonds,
Lemon juice, each, a sufficient quantity.
Diluted alcohol, five ounces.

Form a paste. *Taddei.*

℞. Blanched almonds,
Rice flour, each, eight ounces.
Bean flour, sixteen ounces.
Myrrh, two ounces.
Camphor, one ounce and a half.
White soap, twenty ounces.

Form a paste. *Spielmann.*

Used as a cosmetic.

Almond Powder.

℞. Blanched almonds, two pounds.
Rice flour,
Orris root, each, four ounces.
Benzoin,
Carbonate of potassium,
Spermaceti, each, one ounce.
Oil of rhodium,

Oil of lavender,
" cloves, each, thirty drops.

Form a powder. Used as a cosmetic.

Compound Almond Powder.

℞. Sweet almonds, eight ounces.
Powdered gum Arabic, one ounce.
" sugar, four ounces.

Blanch the almonds and wipe them dry; then rub them lightly in a mortar to a smooth consistence. Mix the gum and sugar, and adding them to the pulp gradually rub the whole to a coarse powder. *Brit. Ph.*

This is the *almond confection* of the older pharmacopœias.

One drachm triturated with an ounce of distilled water forms an excellent emulsion, which is nutritive and emollient.

Compound Almond Lotion.

℞. Sweet almonds, one ounce.
Bitter " four drachms.

Form an emulsion with

Cherry brandy, ten fl. ounces.

Add

Corrosive sublimate, six grains.
Tincture of benzoin, six drachms.
Lemon juice, four drachms.

Mix. As a lotion for pustular eruptions on the face. The mixture should be shaken before it is used. *Siemerling.*

Syrup of Orgeat.

℞. Sweet almonds, twelve troyounces.
Bitter " four troyounces.
Sugar, seventy-two troyounces.
Water, sufficient.
Orange-flower water, four fl. ounces.

Blanch the almonds, pound thoroughly in a marble mortar (after having soaked them in cold water), mix gradually with one pint and a half of water, and strain with expression. Repeat the process with the same quantity of water, and make up the strained liquor to three pints, in which dissolve the sugar with a gentle heat. When cold, add the orange-flower water and mix. *Ambrose Smith.*

The almond syrup of *Paris Codex* and *Ph. Germ.* are nearly identical with this.

The *U. S. Ph.* directs an almond syrup which only differs from the above in not containing any orange-flower water. All of these syrups are demulcent and nutritive. But they are chiefly used as flavoring ingredients in cough mixtures.

Artificial Milk.

℞. Blanched almonds, No. 2.

Make an emulsion with

Boiling water, four fl. ounces.
Cow's milk, six fl. ounces.
White sugar, one drachm.

Strain. As a substitute for breast-milk for infants. *Rosenstein.*

Anodyne Milk.

℞. Blanched almonds, four ounces.
Melon seed,
Squash seed, each, one ounce.
Lettuce seed,
Poppy seed, each, one drachm.

Triturate well, adding gradually

Barley water, sufficient.

Strain and express; to be taken in glassful doses, to which are to be added two drachms of sugar. *Pierquin.*

Milk of Roses.

℞. Almonds, one ounce.
Rose water, five fl. ounces.
Alcohol, one fl. ounce.
Soap, half a drachm.
Attar of roses, two drops.

Blanch the almonds, dry them well with a cloth, beat them to a paste, add the soap, triturate well, then add the rose water and alcohol, rub well together, and strain through fine linen. This keeps well. *Bateman.*

℞. Blanched almonds, eight ounces.
Rose water, three pints.
Windsor soap,
White wax,
Oil of almonds, each, half an ounce.
Rectified spirit, twelve ounces.
Oil of bergamot, half an ounce.
" lavender, one drachm.
Attar of roses, half a drachm.

Beat the almonds with the rose water, so as to form an emulsion; melt the soap, wax, and almond oil together by a gentle heat, and rub the mixture with the emulsion; strain; dissolve the essential oils in the spirit, and mix with the strained emulsion. *Redwood.*

Goulard's Lotion.

℞. Emulsion of bitter almonds, two hundred parts.
Corrosive sublimate,
Sal ammoniac, each, one part.

Foy.

Almond Cream.

℞. Marrow pomatum,
Almond oil, each, two ounces.
Melt by a gentle heat, and add
Oil of jasmine, two drachms,
stirring till cold. As an application to the hair. *Bateman.*

Oil of Almonds.

The kernels of almonds are to be rubbed and shaken in a bag to remove the reddish dust that adheres to them, then ground in a mill or pounded in a stone mortar. The marc is to be subjected to pressure in a linen bag, and the oil filtered.

Cold Cream.

℞. Rose water, two fl. ounces.
Oil of almonds, three troyounces and a half.
Spermaceti, one troyounce.
White wax, two drachms.
Melt together the oil, spermaceti, and wax, by means of a water-bath, add the rose water, and stir constantly until the mixture is cold. *U. S. Ph.*

Almond Emulsion.

℞. Compound almond powder, one ounce.
Distilled water, eight fl. ounces.
Rub together, and strain. *Brit. Ph.*

℞. Sweet almonds, half a troyounce.
Gum Arabic, half a drachm.
Sugar, two drachms.
Water, half a pint.
Blanch the almonds, beat them with the gum and sugar till thoroughly mixed; then rub the mixture with the water gradually added, and strain. *U. S. Ph.*

℞. Blanched sweet almonds,
Sugar, each, one part.
Water, twenty parts.
Rub together and strain. *Paris Codex.*
A good demulcent, in irritation or inflammation of mucous membranes, and may be freely used.
Aromatic almond emulsion contains in one pint half a fl. ounce of orange-flower water in the place of the same quantity of water, and by adding to each fl. ounce half a grain of nitrate of potassium the *nitrated almond emulsion* of French pharmacy is obtained.

Compound Almond Emulsion.

℞. Sweet almonds, four parts.
Hyoscyamus seed, one part.
Dilute bitter almond water, sixty-four parts.
Make an emulsion, and add
Powdered sugar, six parts.
Magnesia, one part.
Mix. Dose, a tablespoonful. *Ph. Germ.*

White Linctus.

℞. Blanched sweet almonds, one ounce.
Blanched bitter almonds, thirty grains.
White sugar, one ounce.
Powdered tragacanth, eight grains.
Orange-flower water, two drachms and a half.
Water, four ounces.
Beat the almonds with a little water and most of the sugar until a homogeneous paste is obtained, add gradually the remainder of the water, and strain. Triturate the tragacanth with the remainder of the sugar, then add gradually the emulsion, with long-continued trituration, and finally the orange-flower water. The result is about five ounces. Dose, a tablespoonful.
Paris Codex.

Green Linctus.

℞. Pistachio nuts (*Pistacia Vera*) No. 14.
Syrup of violets, one ounce.
Oil of almonds, half an ounce.
Gum tragacanth, sixteen grains.
Tincture of saffron, twenty drops.
Orange-flower water, two drachms.
Water, four ounces.
Make an emulsion. *Soubeiran.*
Employed as a demulcent cough mixture. Dose, a tablespoonful.

Emollient Clyster.

℞. Oil of almonds,
Brown sugar, each, one ounce.
Barley water, half a pint.
Mix. *Saunders.*

Bitter Almond Water.

℞. Oil of bitter almonds, sixteen minims.
Carbonate of magnesium, one drachm.
Water, two pints.

Rub the oil with the carbonate, then with the water gradually added, and filter through paper. *U. S. Ph.*

The full dose is a tablespoonful.

Concentrated Bitter Almond Water.

℞. Bitter almonds, twelve parts.

Pound them, express the oil, avoiding heat, and macerate with

Water, eighty parts,

add

Alcohol, two parts,

and distil ten parts, or enough so that the distillate contains in one thousand parts one part of hydrocyanic acid, this quantity yielding, with nitrate of silver, five parts of dry cyanide of silver. *Ph. Germ.*

Diluted Bitter Almond Water.

℞. Concentrated bitter almond water, one part.
Distilled water, nineteen parts.

Mix. Also known as *Cherry Water.* *Ph. Germ.*

Diuretic Water.

℞. Bitter almonds, four ounces.
Dried elder flowers, six ounces.
Peach kernels, four ounces.
Cherry kernels, two ounces.
Wine, eight pints.

Digest for two days and distil one-half. *Palat. Ph.*

Said to act as a diuretic in doses of half an ounce, but requires to be used with much caution.

Oil of Bitter Almonds.

℞. Bitter almonds, twenty pounds.
Water, a sufficient quantity.

Pound the almonds, express the oil, let the cake macerate in water for twenty-four hours, distil as long as the product is odorous, separate the oil, redistil the water, and again separate the oil. *Cottereau.*

Very poisonous, especially when fresh; principally employed as a flavoring ingredient, but should always be used with great caution. Dose, half a drop.

Lockstadt's Pills.

℞. Sulphate of quinia, three grains.
Aromatic powder, ten grains.
Oil of bitter almonds, one drop.
Extract of gentian, sufficient.

Make ten pills. The whole to be taken at a dose, before an expected paroxysm of intermittent fever. *Phœbus.*

Mixtures of Oil of Almonds.

℞. Oil of almonds, Simple syrup, Water, } equal parts.

Make an emulsion. *Ratier.*

℞. Oil of almonds, two parts.
Gum Arabic, one part.
Water, seventeen parts.

Make an emulsion. *Ph. Germ.*

℞. Oil of almonds, Gum Arabic, Orange-flower water, } each, half an ounce.
Syrup of mallows, one ounce.
Water, three ounces.

Make an emulsion. *Paris Codex.*

℞. Oil of almonds, one ounce.
Yolk of egg, one.
Syrup of mallows, one ounce.
Orange-flower water, two drachms.
Water, two ounces.

Make an emulsion. *Guibourt.*

℞. Oil of almonds,
Syrup of orgeat, each, seven drachms.
Gum Arabic, two drachms.
Bitter almond water, half an ounce.

Make an emulsion. Dose, a teaspoonful. *Radius.*

℞. Oil of sweet almonds,
Syrup of tolu, each, one fl. ounce.
Distilled water, six fl. ounces.
Solution carbonate potassium, sufficient.

Make emulsion. A tablespoonful two or three times a day in catarrh. *Ainslie.*

Cosmetic Liniment.

℞. Oil of almonds, one ounce.
Balsam of Mecca, one drachm.
Carb. of potassium, half a drachm.
Rose water, four fl. ounces.

Rub the balsam with the oil, add the carbonate, triturate for ten minutes, and gradually introduce the rose water.

Macassar Oil.

℞. Oil of almonds, at will.
Alkanet root, sufficient to color.
Oil of cinnamon, sufficient to scent. *Steph. and Church.*

Bandoline.

℞. Oil of almonds, one ounce.
White wax, one drachm.
Tincture of mastic, three drachms.
Oil of bergamot, one drachm.

Melt the oil and wax together by a moderate heat, then add the tincture of mastic and oil of bergamot, and strain.

To fix and retain the hair in form.
Redwood.

AMYLUM

STARCH.

Mucilage of Starch.

℞. Starch, two drachms.
Water, ten fl. ounces.

Triturate the starch with the water gradually added, then boil for a few minutes.
Brit. Ph.

Mainly employed as a demulcent injection in irritation of the rectum, etc., and forms a good vehicle for laudanum and other active remedies when given in enemata.

Compound Powder of Starch.

℞. Liquorice root, one ounce.
Starch,
Gum Arabic,
" tragacanth,
Quince seed,
Poppy seed, } each, two ounces.
Blanched almonds, four ounces.
Sugar candy, twelve ounces.

Triturate well. *Van Mons.*

Has been advised in spitting of blood, catarrh, and diarrhœa, in doses of half a drachm to a drachm.

Starch Lozenges.

℞. Starch,
Orris root, each, half an ounce.
Extract of liquorice, one ounce.
Saffron, half an ounce.
White sugar, one pound.

Mix, and form into lozenges. *Pideret.*

℞. Starch, one ounce.
Gum Arabic, two ounces.
White sugar, one pound.
Benzoic acid, half a drachm.
Rose water, sufficient

to form a paste. To be divided into lozenges. *Swediaur.*

These lozenges are somewhat stimulating, and are best suited to chronic catarrhs.

Starch Jelly.

℞. Starch, six ounces.
Water, six pounds.

Boil till reduced to three pounds, and add

Wine, four ounces.
Lemon juice, one ounce.
Simple syrup, two ounces.

Mix well, and permit to cool. *Swediaur.*

A nourishing diet for convalescents.

Mixture of Starch and Suet.

℞. Cow's milk, six pounds.
Mutton suet, two ounces.

Boil by a gentle heat, constantly stirring, and add

Starch, a spoonful.

Boil a short time, and add

White sugar, a sufficiency.

Recommended in wineglassfuls, in dysentery. *Pringle.*

Clyster of Starch.

℞. Starch, half an ounce.
Water, a pint.

Mix the starch with three ounces of cold water, then add the remainder of the water boiling hot. *Paris Codex.*

AMYLI IODIDUM.

IODIDE OF STARCH.

℞. Iodine, twenty-four grains.

Triturate with a little water, and add gradually

Powdered starch, one ounce.

Continue the trituration till the mixture assumes a deep and uniform color. *Buchanan.*

Dose, half a drachm, to be gradually increased to four drachms. Given in cases requiring the use of iodine.

ANEMONE.

ANEMONE.

A genus of perennial herbs with radical leaves. They are all acrid and stimulating. The species most generally employed are the *A. pratensis* and *A. pulsatilla*, both natives of Europe; *A. Ludoviciana* of this country appears to have the same properties, and has been employed by Dr. W. H. Miller in place of the *A. pratensis* which was at one time in much repute in amaurosis and chronic diseases of the skin.

Sex. Syst. Polyand. polygyn. *Nat. Syst.* Ranunculaceæ.

Lindley, Med. Flor. 2. Griffith, Med. Bot. 80.

Extract of Anemone.

℞. Fresh anemone, twenty parts.

Pound in a mortar with a little water, express the juice, evaporate in a water-bath to two parts, add two parts of alcohol, filter after twenty-four hours, and evaporate to the proper consistence. *Ph. Germ.*

The dose is from one grain to four, gradually increasing. It has been advised in doses of half a grain to a grain, in combination with sugar of milk, in hooping-cough.

Anemone Pills.

℞. Powder of anemone, one drachm.
Extract of anemone, sufficient.

Make sixty pills. Dose, one to five, three times a day, gradually increasing.

Said to have proved useful in amaurosis.

Collyrium of Anemone.

℞. Anemone, three drachms.
Water, sufficient

to make six ounces of infusion; add

Corrosive sublimate, one grain.

To be dropped in the eye, in opacity of the cornea and incipient cataract. *Radius.*

Water of Anemone.

℞. Fresh anemone, four parts.
Water, sufficient

to prevent empyreuma. Distil six parts. *Van Mons.*

This is the best preparation, as it contains the active principle, but will not keep long. It is somewhat caustic, and has been recommended to remove freckles on the skin.

ANETHUM.

Dill.

This is the fruit of *Anethum graveolens*, an herbaceous plant cultivated in Europe. It is flat, of an oval shape, and has a pale membranous margin, an aromatic odor, and a warm bitterish taste.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Dill is an aromatic stimulant and carminative, and is given in doses of ten to thirty grains; the volatile oil, which is obtained by distillation with water, is used in doses of one to five drops.

Dill Water.

℞. Dill fruit, bruised, one pound.
Water, twenty pounds.

Distil ten pounds. *Brit. Ph.*

Used mainly as a vehicle.

ANGELICA.

Angelica.

The only species of this genus that was formerly officinal in our Pharmacopœia is *A. atro-purpurea.* This possesses much the same properties as the Garden Angelica, and is popularly used in flatulent colic and cardialgia. In Europe, the *A. officinalis* is generally used; and, as both species appear to possess the same properties, they may be indifferently employed.

Sex. Syst. Pentand. monog. *Nat. Syst.* Apiaceæ.

Torrey and Gray, Flor. 1, 64. Griffith, Med. Bot. 322.

Compound Spirit of Angelica Fruit.

℞. Anise,
Angelica fruit, each, half a pound.
Proof spirit, one gallon.

Water sufficient to prevent empyreuma. Macerate for twenty-four hours, and distil a gallon.

A stimulant, used as a stomachic and carminative. Dose, half a drachm to four drachms. *Dublin Ph.* 1826.

Tincture of Angelica.

℞. Angelica root, one part.
Alcohol, sp. gr. 0.89, five parts.

Macerate for a week, and filter. *Danish Ph.*

Employed as a carminative and alexipharmic, in doses of one fl. drachm.

Compound Spirit of Angelica.

℞. Angelica root, sixteen parts.
Valerian,
Juniper berries, each, four parts.
Alcohol, seventy-five parts.
Water, one hundred and twenty-five parts.

Macerate for twenty-four hours, distil one hundred parts, and add

Camphor, two parts.

Dissolve. *Ph. Germ.*

Water of Angelica.

℞. Angelica root, one part.
Water, six parts.

Distil three parts. *Cottereau.*

Errhine Mixture.

℞. Water of angelica,
" orange flowers,
" roses, equal parts.

Mix. *Pierquin.*

This has been recommended to destroy the fetid smell in ozœna.

Conserve of Angelica.

℞ Fresh root of angelica, one part.
Water, eight parts.

Macerate for a few days, boil, clarify the decoction, and add

Sugar, one part and a half.

Cook the root in the syrup, and preserve in this state, or dry. *Giordano.*

Essence of Angelica.

℞ Angelica root, one part.
Diluted alcohol, eight parts.
Water, sixteen parts.

Distil off six parts. Stomachic and carminative. *Van Mons.*

ANGUSTURA.

ANGUSTURA BARK. CUSPARIA BARK.

This is recognized by the U. S. Pharmacopœia as the product of *Galipea officinalis*, but is also obtained from one or more other species, all natives of South America. It is compact, in flat or rolled, but seldom quilled pieces, of a light gray color externally, and of a yellowish-fawn within. It is very fragile, with a resinous fracture. The odor is faint but disagreeable; the taste is bitter and somewhat aromatic, leaving a sensation of pungency. Its powder is pale yellow.

Sex. Syst. Heptand. monog. *Nat. Syst.* Rutaceæ.

Hancock, Trans. Med. Soc. 1849. Griffith, Med. Bot. 192.

It is a stimulating tonic, in large doses acting on the stomach and bowels. It is more used in chronic diarrhœa, and a debilitated condition of the stomach and bowels, than as a febrifuge. Dose, ten to thirty grains.

Infusion of Angustura.

℞ Bruised angustura bark, half a troyounce.
Boiling water, one pint.

Macerate for two hours in a covered vessel, and strain. It may also be obtained by percolating the bark with water. *U. S. Ph.*

The infusion of the *Brit. Ph.* is about one-fifth weaker.

The dose is two fl. ounces, every two to four hours.

Tincture of Angustura.

℞ Powdered angustura bark, four and a half ounces.
Proof spirit, two pints.

Macerate for fourteen days, then filter. *Ed. Ph.*

This contains the active principles of the bark, and may be given in the dose of one or two fl. drachms.

Electuary of Angustura.

℞ Powdered angustura, half an ounce.
Powdered canella, half a drachm.
Honey, a sufficient quantity.

Make an electuary. *Foy.*

This has been employed with benefit in chronic diarrhœa and dysentery, in doses of about a drachm.

Mixture of Angustura.

℞ Infusion of angustura, six fl. ounces.
Cinnamon water, half fl. ounce.
Laudanum, twenty drops.

Mix. Three spoonfuls a day. *Radius.*

ANISUM.

ANISE.

This is the fruit of *Pimpinella anisum*, a perennial plant, cultivated largely in some parts of Europe, and often met with in gardens in this country. The fruit is of a grayish-green color, of an ovate, compressed form, with five pale, narrow ridges. It is aromatic, and has a pleasant, sweetish taste.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Linn. Sp. Pl. 378. Griffith, Med. Bot. 319.

Anise is an aromatic stimulant, and is used in various forms, in colic and dyspepsia, and to prevent the griping of some purgatives. The oil is officinal, but is almost entirely superseded by that of *Illicium anisatum*, which is nearly identical.

Spirit of Anise.

℞ Oil of anise, one fl. ounce.
Stronger alcohol, fifteen fl. ounces.

Dissolve. *U. S. Ph.*

Dose, twenty to forty drops, on sugar.

℞ Anise, bruised, one part.
Alcohol of 56 per ct., eight parts.

Macerate for two days, add sufficient water, and distil eight parts. *Paris Codex.*

Essence of Anise.

℞. Oil of anise, one fl. ounce.
Rectified spirit, four fl. ounces.
Mix. Dose, ten to twenty minims.
Brit. Ph.

Anise Water.

℞. Oil of anise, half a fl. drachm.
Carbonate of magnesium, one drachm.
Distilled water, two pints.

Rub the oil with the carbonate, then with the water, gradually added, and filter.

It may also be prepared by distilling eight pints from a mixture of ten troy-ounces of powdered anise and sixteen pints of water. *U. S. Ph.*

Dose, a tablespoonful.

Anise Lozenges.

℞. White sugar,
Anise water, each, two ounces.

Evaporate to the consistence of honey, and add a mixture of

White sugar, four ounces.
Oil of anise, half a drachm.

Pour on a cold marble slab. *Cottereau.*

Used as a carminative and anti-dyspeptic.

Mixture of Anise.

℞. Powdered anise,
" fennel,
Extract of liquorice, each, one ounce.
Syrup of mallows, twelve ounces.
Mix. *Hanover Pharm.*

Said to be an excellent carminative, especially for children, in doses of about a teaspoonful.

Tincture of Anise.

℞. Spirit of anise, sixteen ounces.
Elixir proprietatis, one ounce.
Aromatic confection, half an ounce.
Pink flowers, one drachm.

Filter, after sufficient maceration. *Wirtemberg Ph.*

Stomachic, carminative, and pectoral. Dose, one to two drachms.

Oil of Anise Mixture.

℞. Oil of anise, twelve minims.
Sugar, one drachm.
Tincture of ginger, two fl. drachms.
Peppermint water, six fl. ounces.
Mix. Dose, two or three spoonfuls, as a carminative. *Ainslie.*

ANISUM STELLATUM.

Star Anise.

Under this name the fruit of *Illicium anisatum* is recognized by several European pharmacopœias. This evergreen tree is indigenous to Japan and China.

Sex. Syst. Polyand. polygyn. *Nat. Syst.* Magnoliaceæ.

The fruit consists of about eight capsules, which are united at their base, forming the figure of a star. Each capsule is usually ruptured at its upper margin, showing the flat, ovate, shining seed. The capsules contain a considerable portion of volatile oil, which is chemically and medicinally identical with that of true anise, but is rather less agreeable in flavor.

ANTHEMIS.

Chamomile.

Several species of *Anthemis* are employed in medicine, but the most important and the only one recognized in the U. S. Pharm., is *A. nobilis*. This is an herbaceous perennial, a native of Europe, where it is also extensively cultivated, and is also to be found in gardens in this country. The part used is the flowers; these, as found in the shops, are large, roundish, of a yellowish-white color, a peculiar, somewhat balsamic odor, and a warm, bitter, aromatic taste.

Sex. Syst. Syngen. super. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1260. Griffith, Med. Bot. 401.

Chamomile is an aromatic bitter tonic, in small doses, but emetic in large ones; the usual mode of administration is in infusion.

Infusion of Chamomile.

℞. Chamomile, half a troyounce.
Boiling water, one pint.

Macerate for ten minutes in a covered vessel, and strain. *U. S. Ph.*

The infusion of *Brit. Ph.* is about one-fifth weaker.

When cold, it is tonic in doses of one or two fl. ounces, several times a day. As an aid to the operation of emetics, it should be given in a tepid state, and largely.

Extract of Chamomile.

℞. Chamomile, one pound.
Water, ten pounds.

Boil down to one-half, press, filter whilst hot, and evaporate in the water-bath to proper consistence, adding at the end of the process fifteen minims of oil of chamomile. *Brit. Ph.*

A mild, bitter tonic, in doses of ten to twenty grains.

Mixture of Chamomile.

℞. Infusion of chamomile, four fl. ounces.
Syrup of orange-flowers, one fl. ounce.
Ethereal tincture of valerian, one fl. drachm.

Mix. *Foy.*

This has proved useful in hysteria and other nervous diseases, especially where the stomach is disordered. Dose, a dessert-spoonful.

℞. Extract of chamomile,
Gum Arabic, each, two drachms.
Chamomile water, five fl. ounces.
Tamarind pulp,
Syrup of chamomile, each, one ounce.

Mix. *Phœbus.*

Said to be useful in diarrhœa, in table-spoonful doses.

Syrup of Chamomile.

℞. Chamomile, four ounces.
Boiling water, forty ounces.

Infuse for six hours, express, strain, and decant. Dissolve in every ten ounces of the colature nineteen ounces of sugar. *Paris Codex.*

℞. Coarsely powdered chamomile, one ounce.
Cold water, sufficient.
Coarsely powdered sugar, twenty ounces.

Obtain twelve fl. ounces of infusion by displacement of the chamomile and water. Remove the residue, and substitute the sugar in its place; on this pour the infusion till entirely dissolved. Dose, a table-spoonful. *E. Parrish.*

Terebinthinated Oil of Chamomile.

℞. Chamomile, one hundred and twenty parts.
Oil of turpentine, one part.

Beat the chamomile into a pulpy mass with sufficient water, add the oil of turpentine, and distil until oil ceases to come over. Separate this from the water, and filter.

Used in liniments for rheumatic affections. *Corput.*

Oleo-infusion of Chamomile.

℞. Bruised chamomile, one part.
Olive oil, ten parts.

Digest for two hours in a covered vessel, express and filter. *Paris Codex.*

Compound Chamomile Pills.

℞. Assafetida, one scruple and a half.
Extract of chamomile, one drachm.
Powdered rhubarb, one scruple.

Make mass, and divide into thirty pills. Three, twice a day in flatulent dyspepsia. *Ainslie.*

ANTIMONIUM.

ANTIMONY.

A metal of a silvery blue color, very brilliant, of a lamellar texture, brittle, and easily pulverized. Metallic antimony, or Regulus of antimony, is not officinal in our Pharmacopœia, but is the basis of a great number of very important preparations.

ANTIMONII CHLORIDUM.

CHLORIDE OF ANTIMONY.

℞. Sulphuret of antimony, one part.
Muriatic acid, three parts.

Dissolve by aid of a gentle heat, let stand, decant, evaporate, and then distil almost to dryness. *Paris Codex.*

Solution of Chloride of Antimony.

℞. Black sulphuret of antimony, one pound.
Muriatic acid, four pints.

Add, apply a gentle and increasing heat, and finally boil for fifteen minutes. Strain and boil down to two pints (imper.). Sp. gr. 1.47. *Brit. Ph.*

The specific gravity directed by *Ph. Germ.* is 1.34 to 1.36.

The butter of antimony is used as a caustic, to destroy fungous flesh and to cauterize poisoned wounds.

Ointment of Chloride of Antimony.

℞. Liquid chloride of antimony,
Corrosive sublimate, each, one drachm.

Powdered savine, two drachms.
Lard, six drachms.

Mix. To destroy venereal excrescences. *Radius.*

ANTIMONII OXIDUM.

Oxide of Antimony.

℞. Solution of chloride of antimony, sixteen fl. ounces.
Carbonate of sodium, six ounces.
Water, twenty pounds.

Pour the antimonial solution into the water, mix, let settle, decant, and wash twice, each time with ten pounds of distilled water, and decant; then add the carbonate previously dissolved in two and a half pounds of water, stir frequently for half an hour, collect on a calico filter, and wash thoroughly with boiling distilled water. Dose, one to four grains. *Brit. Ph.*

The process of *U. S. Ph.* is similar.

Antimonial Powder.

℞. Oxide of antimony, one ounce.
Phosphate of calcium, two ounces.

Mix thoroughly. Dose, three to ten grains. *Brit. Ph.*

This is a substitute for *James's antimonial powder.*

James's Powder.

℞. Tartar emetic, one scruple.
Prepared burnt hartshorn,
Oxide of antimony, each, five scruples.

Mix, and divide into twenty-one grain powders. Said to be the formula by which the original powder was prepared by Dr. James. (Vid. *Phil. Journ. Pharm.*, vi. 282.)

Pills of Antimonial powder and Calomel.

℞. Antimonial powder, ten grains.
Powdered opium,
Calomel, each, two grains.
Conserve of roses, sufficient.

Mix, and make four pills. Two to be taken at bedtime in acute rheumatism. *Ellis.*

ANTIMONII SULPHURETUM.

Sulphuret of Antimony. Black Antimony.

The sulphuret or crude antimony is now seldom used as a medical agent, but is the basis of almost all the preparations of that metal. Some forms of exhibition are, however, still in favor on the continent of Europe.

Sulphurated Antimony.

℞. Sulphuret of antimony, six troy-ounces.
Solution of potassa, four pints.
Distilled water,
Diluted sulphuric acid, each, a sufficient quantity.

Mix the sulphuret with the solution of potassa and twelve pints of the water, boil by a gentle heat for two hours, frequently stirring, and adding more water, to keep up the original quantity. Strain, while hot; and gradually add the sulphuric acid as a precipitate is produced; wash well with hot water, dry, and powder. *U. S. Ph.*

In the process of *Brit. Ph.* soda is substituted for potassa.

Dose, one to five grains.

Pills of Sulphuret of Antimony.

℞. Sulphuret of antimony, one ounce.
Guaiacum, two drachms.
Extract of fumitory, sufficient.

Mix, and make pills of two grains each. *Radius.*

Formerly much employed in Germany, as an alterative in diseases of the skin and rheumatic affections.

℞. Sulphuret of antimony, half a drachm.
Extract of opium, five to eight grains.
" guaiacum, two drachms.

Make fifty pills. *Foy.*

Advised in gouty affections; nine pills being given three times a day.

Lozenges of Sulphuret of Antimony.

℞. White sugar, one hundred and ninety-two parts.
Sulphuret of antimony, eight parts.
Mucilage of gum Arabic, one part.

Mix, and make lozenges of twelve grains, each containing half a grain of the sulphuret. *Béral.*

Much employed in Europe, as an alterative in diseases of the skin, in rheumatism, gout, etc.

Ointment of Sulphuret of Antimony.

℞ White wax, four ounces.
Olive oil, twelve ounces.

Melt together, and add

Powdered charcoal, two ounces.
Precipitated sulphur,
Sulphuret of antimony, each, one ounce.

Stir well until cold. *Radius.*

Used as an application in tinea capitis.

Oxysulphuret of Antimony.

℞ Carbonate of sodium, twenty-three troyounces.
Water, sixteen pints.
Sulphuret of antimony, one troyounce.

Boil the antimony for an hour in the solution of soda, filter the hot liquor into a warm earthen vessel, cool very slowly, wash the precipitate with cold water, dry at a moderate temperature, and keep in well-closed bottles. *U. S. Ph.*

This is likewise the process of the *Paris Codex* and *Ph. Germ.*

Dose, one to three grains.

Kermesine Powder.

℞ Kermes mineral, two grains.
Sugar of milk,
Gum Arabic, each, one drachm.

Divide into six powders. *Radius.*

Given as a diaphoretic and expectorant, in the dose of one every four hours.

Compound Kermesine Powder.

℞ Kermes mineral, half a drachm.
Ipecacuanha, one grain.
Prepared chalk,
Gum Arabic, each, twelve grains.

Mix, and divide into three powders; one to be taken three times a day, in a spoonful of tea. *St. Marie.*

This formula has been much praised in hooping-cough; the proportions are intended for a child of about twelve years of age.

Lozenges of Kermes Mineral.

℞ Kermes mineral,
Powdered squill, each, sixty grains.
Extract of opium, one drachm.
Ipecacuanha, two drachms.
White sugar, three ounces.
Mucilage of tragacanth, a sufficient quantity.

Mix, and make four hundred lozenges. *Foy.*

These are expectorant and calming in catarrh. One is to be taken every two hours.

℞ Kermes mineral, one drachm.
Powdered gum Arabic, eight ounces.
Extract of opium, twelve grains.
" liquorice, two ounces.
Sugar, thirty-two ounces.
Oil of aniseed, six drops.
Mucilage of tragacanth, sufficient.

Mix, and form ten grain lozenges. Known as *Tronchin's lozenges.* Used in catarrh. *Van Mons.*

℞ Benzoic acid, two drachms.
Sugar, thirty-two ounces.
Powdered orris root, four drs.
" gum Arabic, two ounces.
" starch, four ounces.
Water, four fl. ounces.

Mix, and make fifteen grain lozenges. *Vandamme.*

Emulsion with Kermes Mineral.

℞ Kermes mineral, ten grains.
Oxymel of squill, one ounce.
Emulsion of gum Arabic, four ounces.

Mix. A tablespoonful occasionally. *Radius.*

Mixture with Kermes Mineral.

℞ Kermes mineral, two grains.
Gum Arabic, one drachm.
Syrup, four fl. ounces.
" of grapes, one fl. ounce.

Mix. A tablespoonful occasionally in catarrh, when expectoration is difficult. *Pierquin.*

Golden Sulphuret of Antimony.

℞ Mother water of kermes mineral, at will.

Add gradually,

Acetic acid,

till a precipitate is no longer formed. Wash this well in cold water, and dry by a gentle heat. Dose, one to ten grains. *Paris Codex.*

Powder of Golden Sulphuret of Antimony.

℞. Golden sulph. of antimony,
Camphor, each, a grain and a half to two grains.
Nitrate of potassium, half a drachm to one drachm.
Gum Arabic,
White sugar, each, one drachm.

Triturate well, and divide into six powders. *Radius.*

The dose is one, every two hours, in peripneumonia, after a reduction of the primary symptoms.

℞. Golden sulph. of antimony, eight grains.
Opium, two grains.
Powdered Peruvian bark,
" chamomile,
each, four scruples.

Mix, and divide into eight powders; to be taken during the apyrexia of intermittent fever. *Radius.*

Mixture of Sulphuret of Antimony.

℞. Golden sulph. of antimony, six grains.
Extract of lettuce, one scruple.
Syrup of seneka, two fl. ounces.

Mix. A teaspoonful every two hours. *Phœbus.*

Sulphuret of Antimony and Lime.

℞. Golden sulph. of antimony, one part.
Quicklime, three parts.

Triturate together, and add

Boiling water, twenty-four parts.

Dry with a gentle heat, constantly stirring, and keep in a well-closed bottle. *Batav. Ph.*

Emetic and resolvent. Much praised in gout, rheumatism, scrofula, etc. Dose, one to six grains.

Pills of Sulphuret of Antimony and Lime.

℞. Sulphuret of antimony and lime, half a drachm.
Mucilage of tragacanth, one drachm.

Mix, and make sixty pills; five, thrice a day. *Augustin.*

Plaster of Sulphuret of Antimony and Lime.

℞. Yellow wax, one drachm and a half.

Melt, and mix

Pitch, one ounce;

and incorporate in the cooling mixture

Sulphuret of antimony and lime, five scruples.

As a plaster in sciatica, chronic headache, etc. It sometimes occasions pustules. *Radius.*

ANTIMONII SULPHAS.

SULPHATE OF ANTIMONY.

℞. Antimony, two parts.
Sulphuric acid, three parts.

Heat in an earthen vessel, stirring from time to time, leave the mixture on the fire till it has assumed a grayish-white color, wash carefully, to remove the excess of acid, and dry the powder. *Van Mons.*

ANTIMONII ET POTASSII TARTRAS.

TARTAR EMETIC—TARTARATED ANTIMONY.

℞. Oxide of antimony, two troyounces.
Cream of tartar in powder, two troyounces and a half.
Distilled water, eighteen fl. ounces.

Boil for an hour, filter while hot, and crystallize. *U. S. Ph.*

Dose, as a diaphoretic, one-twelfth to one-sixth of a grain; as an emetic, one to three grains.

Powder of Tartar Emetic.

℞. Tartar emetic, one grain.
Sugar, thirty grains.

Mix, and divide into ten powders. One every three or four hours as a diaphoretic in fevers, after bleeding. *A. T. Thomson.*

Compound Powder of Tartar Emetic

℞. Tartar emetic, half a drachm
Sulphate of potassium, one ounce.
Powdered liquorice, one ounce and a half.

Mix well. Two scruples contain one grain of tartar emetic. *Beasley.*

℞. Tartar emetic, one grain.
Kermes mineral, two grains.
Powdered orris root, one scruple.
" gum Arabic,
" sugar, each, one drachm.

Mix, and divide into twenty-four powders. One every hour, as an expectorant. *Cadet.*

Powder of Tartar Emetic and Quinia.

℞. Tartar emetic, three grains.
Sulphate of quinia, ten grains.

Mix, and divide into six powders. One, every two hours, in apyrexia of obstinate intermittents. Both vomits and purges. *Gola.*

Powder of Tartar Emetic and Phosphate of Calcium.

℞. Tartar emetic, one grain.
Posphate of calcium, thirty-two grains.

Mix. To be divided into four powders; one to be taken in the evening, in chronic dysury produced by checked perspiration. *Swediaur.*

Powder of Tartar Emetic and Ipecacuanha.

℞. Tartar emetic, two grains.
Ipecacuanha, two scruples.
Starch, half a drachm.

Mix, and divide into three powders; one every quarter of an hour, till vomiting is induced. *Radius.*

Bolus of Tartar Emetic.

℞. Tartar emetic, six grains.
Powdered Peruvian bark, six drachms.
Extract of juniper, sufficient.

Mix, and make sixty boluses. To be taken in twenty-four hours in quartan intermittents. *Laennec.*

Pills of Tartar Emetic and Camphor.

℞. Tartar emetic, two grains.
Powdered opium, six grains.
" camphor, thirty-six grains.
Alcohol, three drops.
Conserve of roses, sufficient.

Powder the camphor with the alcohol, add the other powders, mix and incorporate with the conserve, and divide into twelve pills. One every fourth hour as a diaphoretic. *Ellis.*

Pills of Tartar Emetic and Opium.

℞. Tartar emetic,
Opium, each, one grain and a half.
Powdered tragacanth,
Conserve of roses, each, sufficient.

Mix, and make twenty-five pills. Two night and morning, in chronic pulmonary catarrh. *Parrish.*

℞. Tartar emetic twelve grains.
Opium, ten grains.
Crumb of bread,
Gum Arabic, each, sufficient.

Mix, and make pills of half a grain. Dose, one increased to two in chronic rheumatism. *Broussais.*

Pills of Tartar Emetic and Guaiacum.

℞. Tartar emetic, one grain.
Powdered guaiacum, half a drachm.
Pill of aloes and myrrh, half a drachm.
Molasses, sufficient.

Mix, and make sixteen pills. *Beasley.*

Solution of Tartar Emetic.

℞. Tartar emetic, four grains.
Sugar, one drachm.
Distilled water, four fl. ounces.

Dissolve. A tablespoonful every ten or fifteen minutes till it operates. *Ellis.*

Solution of Tartar Emetic and Squill.

℞. Tartar emetic, two grains.
Oxymel of squill, half an ounce.
Water, two fl. ounces and a half.

Mix. One-half to be taken, and if it does not vomit in fifteen minutes, the remainder. *Augustin.*

Emulsion of Tartar Emetic.

℞. Tartar emetic, five grains.
Camphor, half a drachm.
Blanched almonds,
Syrup, each, one ounce.
Water, ten fl. ounces.

Make an emulsion with the almonds and water, mix the camphor rubbed with a few drops of alcohol, and add the tartar emetic; when dissolved, add the syrup; emetic and expectorant, according to the dose. *Van Mons.*

Clyster of Tartar Emetic.

℞. Tartar emetic, one to two scruples.
Tepid solution of gum Arabic, one pint.

To overcome obstinate constipation. To be used with much caution. *Chapman.*

℞. Tartar emetic, three to eight grains.
Infusion of arnica, twelve fl. ounces.

Dissolve. In apoplexy and cerebral affections. *Foy.*

Lotion of Tartar Emetic.

℞. Tartar emetic, one scruple.
Water, one pint.

Dissolve. In cutaneous affections. *Pierquin.*

Lotion of Tartar Emetic and Corrosive Sublimate.

℞. Tartar emetic, one drachm.
Corrosive sublimate, five grains.
Compound spirit of lavender, one fl. drachm.
Water, one fl. ounce.

Mix. Wet the finger with the solution, and rub on the part for five or ten minutes; it will cause a pustular eruption in a few hours. *Hannay.*

Lotion of Tartar Emetic and Camphor.

℞. Tartar emetic, one drachm.
Boiling water, one pint.
Tincture of camphor, half a fl. ounce.

Mix. As a counter-irritant on the chest, in pulmonary complaints. *Augustin.*

Ointment of Tartar Emetic.

℞. Tartar emetic, two drachms.
Sugar, one drachm.
Cinnabar, five grains.
Spermaceti ointment, nine drachms.

Mix. *Jenner.*

℞. Tartar emetic, one hundred grains.
Lard, four hundred grains.

Mix. *U. S. Ph.*

The same proportions are directed by *Brit. Ph.* and *Ph. Germ.* The *Paris Codex* directs one part of tartar emetic to three parts of ointment of benzoin.

The ointment occasions a pustular eruption upon the skin.

Compound Tartar Emetic Ointment.

℞. Tartar emetic, half a drachm.
Sal ammoniac, one drachm.
Camphor, twenty-five grains.
Musk, ten grains.
Lard, one ounce.

Mix. As a counter-irritant in chronic diseases of the liver. *Fabre.*

Plaster with Tartar Emetic.

℞. Tartar emetic, in fine powder, one troyounce.
Burgundy pitch, four troyounces.

Melt the pitch, strain, add the powder and stir well while cooling. *U. S. Ph.*

Or it may be made by sprinkling tartar emetic on a pitch or adhesive plaster. *Ellis.*

It takes some time to produce its effect, and the eruption that ensues is very irritating and painful.

℞. Resin plaster, one ounce.
Resin, four drachms.
Venice turpentine, three drachms.

Melt together by a gentle heat, and when nearly cold add

Powdered tartar emetic, one drachm.

To be applied to the nape of the neck in scarlatina in children, also in rheumatism. *Niemann.*

Ammoniacal Liniment with Tartar Emetic.

℞. Ammoniacal liniment, one fl. ounce.
Tartar emetic, one drachm.

Mix. To indolent tumors, etc. *Ellis.*

Antimonial Wine.

℞. Tartar emetic, thirty-two grains.
Boiling distilled water, one fl. ounce.
Sherry wine, sufficient.

Dissolve the salt in the water and add wine sufficient to make one pint. *U. S. Ph.*

Antimonial wine of *Brit. Ph.* and *Ph. Germ.* is of the same strength. *Paris Codex* directs one part of tartar emetic to three hundred parts of Malaga wine.

Dose, as an emetic for children, from thirty drops to a fl. drachm, every fifteen minutes, till it operates.

Collyrium with Antimonial Wine.

℞. Antimonial wine, half fl. ounce.
Rose water, four fl. ounces.

Balsam of Fioraventi, two drops.
Mix. Recommended in chronic ophthalmia. *Spielmann.*

Mixture of Antimonial Wine and Ammoniac.

℞. Ammoniac, one scruple.
Oxymel of squill, half fl. ounce.
Antimonial wine, one fl. drachm.
Syrup of liquorice, one fl. ounce and a half.
Mix. A spoonful every two hours, as an expectorant. *Phœbus.*

Mixture of Antimonial Wine and Laudanum.

℞. Antimonial wine, three fl. drachms.
Laudanum, one fl. drachm.
Mix. Fifteen drops, every half hour or hour in rheumatic diarrhœa. *Monro.*

Mixture of Antimonial Wine and Bittersweet.

℞. Antimonial wine, half fl. drachm.
Syrup of marsh mallow, three fl. drachms.
Fennel water, one fl. ounce and a half.
Extract of bittersweet, fifteen grains.
Cream of tartar, forty-five grains.
Mix. A teaspoonful every hour, in hooping-cough in young children. *Phœbus.*

Syrup of Antimonial Wine.

℞. Antimonial wine, Sal ammoniac, Ammoniac, each, two drachms.
Oxymel of squill, one ounce.
Syrup of mallow, half a pound.
Mix. In pectoral affections, to facilitate expectoration and to keep the bowels open. A spoonful every hour. *Cadet.*

APOCYNUM.

Dogsbane.

Two species of this genus are officinal in the *U. S. Ph.*—*A. androsæmifolium* and *A. cannabinum*, possessed of much the same properties; these are emetic, cathartic, and sometimes diuretic. The latter is rather the more powerful.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apocynaceæ.

A. ANDROSÆMIFOLIUM.

Dogsbane.

Bigelow, Med. Bot. ii. 148. Griffith, Med. Bot. 449.

A native of most parts of the U. S. Emetic and diaphoretic. Dose, 40 grains as an emetic; where it is wished to act on the skin, five to ten grains combined with a grain of opium.

A. CANNABINUM.

Indian Hemp.

Griscom, Am. Journ. Med. Sci. xii. 55. Griffith, Med. Bot. 450.

Found in many parts of the United States. Emetic, in doses of fifteen to thirty grains.

Decoction of Indian Hemp.

℞. Root of Indian hemp, half an ounce.
Water, a pint and a half.
Boil to a pint. *Griscom.*

This has been found useful in dropsy, in doses of one or two fl. ounces, two or three times a day, acting as a hydragogue purgative.

Extract of Indian Hemp.

℞. Powdered root of Indian hemp, one pound.
Water, one gallon.
Macerate for twenty-four hours, boil down to one quart, strain, and evaporate to a proper consistence. Dose, three to five grains. Acts like the decoction, but is not as efficient.

ARALIA.

Most of the species of this genus are medicinal, but two only are officinal.

Sex. Syst. Pentand. pentag. *Nat. Syst.* Araliaceæ.

A. NUDICAULIS

False Sarsaparilla.

Torrey and Gray, Fl. i. 646. Griffith, Med. Bot. 344.

A mild, stimulating diaphoretic, the root has been employed as a substitute for sarsaparilla; best given in infusion.

A. SPINOSA.

ANGELICA TREE.

Torrey and Gray, Fl. i. 647. Griffith, Med. Bot. 345.

The bark is a stimulating diaphoretic; a decoction has been found useful in rheumatic, syphilitic, and cutaneous affections; as has also a tincture.

ARGENTUM.

SILVER.

A solid, white, brilliant, very ductile metal. It is wholly soluble in nitric acid. The only officinal preparations in our pharmacopœia are the nitrate, oxide, and cyanide; but several others are employed in Europe.

ARGENTI CHLORIDUM.

CHLORIDE OF SILVER.

℞. Solution of nitrate of silver, at will.

Add gradually a solution of common salt, wash well the resulting precipitate, and dry by a gentle heat in the shade.

Powder of Chloride of Silver.

℞. Chloride of silver, one grain.
Powdered orris root, two grains.

Triturate well, and divide into ten parts. Used in syphilis, in friction on the tongue. *Serre.*

Ammoniated Chloride of Silver.

℞. Liquid ammonia, at will.

Saturate, by the aid of heat, with recently precipitated and well-washed chloride of silver. Filter whilst hot, and crystallize.

Pills of Ammoniated Chloride of Silver.

℞. Ammoniated chloride of silver, one grain.
Powdered orris root, two grains.
Conserve of linden flowers, sufficient.

Mix, and make fourteen pills. *Serre.*

ARGENTI CYANIDUM.

CYANIDE OR CYANURET OF SILVER.

℞. Nitrate of silver,
Ferrocyanide of potassium, each, two troyounces.
Sulphuric acid, one troyounce and a half.
Distilled water, sufficient.

Dissolve the nitrate in a pint of water, and put the solution in a glass receiver. Dissolve the ferrocyanide in ten fl. ounces of water, and pour the solution into a retort adapted to the receiver. To the solution in the retort add the sulphuric acid diluted with four fl. ounces of water, and distil until the liquid that passes produces no longer a precipitate in the receiver. Then wash and dry the precipitate. *U. S. Ph.*

Used in syphilis, in doses of one-twelfth to one-tenth of a grain.

Ointment of Cyanide of Silver.

℞. Cyanide of silver, ten grains.
Lard, one ounce.

Mix. *Serre.*

Employed as an application to ulcerations of the cornea, irritable ulcers, etc.

ARGENTI IODIDUM.

IODIDE OF SILVER.

℞. Solution of nitrate of silver, at will.

Add gradually a

Solution of iodide of potassium.

Wash the precipitate, and dry by a gentle heat. *Patterson.*

Dose, one or two grains.

Ointment of Iodide of Silver.

℞. Iodide of silver, ten grains.
Lard, one ounce.

Mix. *Serre.*

Used in the same cases as the ointment of the cyanide.

ARGENTI NITRAS.

NITRATE OF SILVER.

℞. Silver, in small pieces, one troyounce.
Nitric acid, two and a half troyounces.
Distilled water, one fl. ounce.

Mix the acid with the water, and dissolve the silver in the mixture, on a sand-bath, keeping an inverted funnel over the porcelain capsule, containing the mixture; then gradually increase the heat, so as to dry the salt. Melt this and continue the heat until free nitric acid is entirely dissipated. Then dissolve in six fl. ounces of distilled water,

let subside and decant. Wash the residue with a fluidounce of water, evaporate the clear decanted liquids, crystallize and dry. *U. S. Ph.*

Fused Nitrate of Silver.

℞ Nitrate of silver, at will.

Melt in a porcelain capsule and continue the heat until frothing ceases, then pour into silver moulds. *U. S. Ph.*

Used as a tonic and antispasmodic, in doses of a fourth of a grain, gradually increased.

Pills of Nitrate of Silver.

℞ Crystallized nitrate of silver, one grain.
Crumb of bread, one drachm.

Make sixteen pills. *Guibourt.*

Each pill contains a sixteenth of a grain of the nitrate.

℞ Nitrate of silver, ten grains.
Opium, four grains.
Extract of gentian,
" liquorice,
each, a drachm and a half.

Make pills of a grain each. These each contain a twentieth of the nitrate. *Brera.*

℞ Nitrate of silver, two grains.
Crumb of bread, sufficient.

Mix well, and divide into pills. One to be taken every six hours.

Advised in chronic epilepsy and other spasmodic disorders. To prevent the blue tinge of the skin, so often produced by a continued use of this salt of silver, eight drops of diluted nitric acid in a fl. ounce of water, should be taken after each pill. *A. T. Thomson.*

Mackensie's Solution.

℞ Nitrate of silver, one scruple.
Distilled water, one fl. ounce.

Dissolve. *Mackensie.*

Used to wash the throat and fauces, in affections of those parts.

Nitrate of Silver Collyrium.

℞ Nitrate of silver, ten grains.
Laudanum, half a fl. drachm.
Distilled water, one fl. ounce.

Mix. *Foy.*

Employed as a wash in purulent ophthalmia.

Anti-Epileptic Mixture.

℞ Nitrate of silver, twelve grains.
Laudanum, twenty drops.
Mucilage of gum Arabic, one ounce.

Mix. *Radius.*

Given in epilepsy, in doses of twenty drops, twice a day.

Hair Dye.

℞ Silver, two drachms.
Steel filings, half an ounce.
Nitric acid, one ounce.
Rain water, eight fl. ounces.

Dissolve, and strain. To be applied by means of a fine brush. *Bateman.*

Indelible Ink.

℞ Carbonate of sodium, half an oz.
Distilled water, four ounces.

Mix, and make mordant.

℞ Nitrate of silver, five scruples.
Gum Arabic, two drachms.
Sap green, one scruple.
Distilled water, one fl. ounce.

Mix, and make ink. *Gray.*

Indelible Ink without Mordant.

℞ Nitrate of silver, one ounce.
Crystallized carbonate of sodium, one ounce and a half.
Tartaric acid, eight scruples.
Strong solution of ammonia, two fl. ounces.
Archil, half fl. ounce.
White sugar, six drachms.
Powdered gum Arabic, ten drachms.
Distilled water, sufficient.

Dissolve the nitrate and carbonate in separate portions of the water, mix the solutions, collect and wash the precipitate on a filter, rub it whilst still moist in a porcelain mortar with the tartaric acid, till effervescence has ceased, add the ammonia to dissolve the tartrate of silver, then mix the archil, sugar, and gum, adding as much water as will make six fl. ounces. *Redwood.*

Ointment of Nitrate of Silver.

℞ Nitrate of silver, two grains.
Lard, two drachms.

Mix well. As an application in acute ophthalmia. *Velpeau.*

℞. Nitrate of silver, four parts.
Lard, thirty parts.

Or, eight parts of the salt to the same proportion of lard, or twelve parts to thirty. Used as an application to white-swelling. *Jobert.*

℞. Nitrate of silver, one part.
Lard, seven and a half parts.

Mix, to smear bougies, in cure of gonorrhœa. *Macdonald.*

Compound Ointment of Nitrate of Silver.

℞. Nitrate of silver, ten to twenty grains.
Oxide of zinc ointment, half an ounce.
Balsam of Peru, one drachm.

Triturate thoroughly together. To heal venereal ulcers, and to promote cicatrization. *Fricke.*

℞. Nitrate of silver, three grains.
Solution of subacetate of lead, five drops.
Lard, one drachm.

Mix well. In chronic ophthalmia. *Guthrie.*

ARGENTI OXIDUM.

Oxide of Silver.

℞. Nitrate of silver, four troyounces.
Water, half a pint.
Solution of potassa, one pint and a half.

Dissolve the nitrate in the water, and add the potassa as long as precipitation occurs. Wash and dry the precipitate, and keep it in opaque, well-stopped bottles. *U. S. Ph.*

Brit. Ph. prepares this with lime-water instead of potassa.

Used as a substitute for the nitrate, in doses of about half a grain twice a day, in diseases of the stomach, of undue secretion, etc.

Pills of Oxide of Silver.

℞. Oxide of silver, six grains.
Powdered liquorice, twelve grains.
Syrup, sufficient.

Make twelve pills. Dose, one pill three times daily, in pyrosis.

Ointment of Oxide of Silver.

℞. Oxide of silver, twenty grains.
Lard, one ounce.

Rub well together. *Serre.*

Used as an application to irritable ulcers, etc.

ARMORACIA.

Horseradish.

This is a species of *Cochlearia*, the *C. armoracia*. A native of many parts of Europe, and much cultivated both there and in this country, for the sake of its roots, so well known as a condiment. The root is the part used in medicine. It has a pungent odor, and a warm, acrid taste.

Sex. Syst. Tetrad. silic. *Nat. Syst.* Brassicaceæ.

Linn. Sp. Pl. 904. Griffith, Med. Bot. 131.

As a remedial agent, it is an active stimulant, and when applied to the skin acts as a rubefacient.

Infusion of Horseradish.

℞. Fresh horseradish, sliced,
Mustard seed, bruised, each, one ounce.
Boiling water, one pint.

Macerate for two hours in a covered vessel, and strain. *U. S. Ph.*, 1850.

It is sometimes used in paralytic, scorbutic, and dropsical affections, attended with debility. The dose is two fl. ounces, three or four times a day.

Compound Syrup of Horseradish.

℞. Scraped horseradish,
Bitter orange-peel, cut and bruised, each, twenty ounces.
Bruised nutmeg, half an ounce.
Proof spirit, one gallon (imp.).
Water, two pints.

Mix, and distil a gallon by a gentle heat. *Brit. Ph.*

Employed as a diuretic, in dropsy with debility. Dose, one to four fl. drachms.

Compound Tincture of Horseradish.

℞. Bruised horseradish, twenty parts.
Black mustard, ten parts.
Chloride of ammonium, five parts.
Alcohol, 60 per ct.
Compound spirit of scurvy grass, each, forty parts.

Macerate for ten days, express, and filter. *Paris Codex.*

Compound Wine of Horseradish.

℞. Fresh horseradish, one ounce.
" water cress, }
" scurvy grass, } each, half an ounce.
" bogbean leaves, }
White mustard, }
Chloride of ammonium, two drachms.
White wine, thirty-three ounces.
Spirit of scurvy grass, half an ounce.

Macerate for ten days, express, and filter. *Paris Codex.*

More frequently used in France than the former. Dose, an ounce or more, in scrofulous and scorbutic affections.

Mixture of Horseradish.

℞. Infusion of horseradish, four fl. ounces.
Syrup of cinchona, one fl. ounce.
Extract of fumitory, one drachm.

Mix. *Foy.*

In spoonful doses, as an antiscorbutic.

Compound Horseradish Cataplasm.

℞. Bruised horseradish, six drachms.
" mustard seed, one ounce.
Flaxseed meal, two ounces and a half.
Vinegar, sufficient.

Mix, and make cataplasm, to be applied to the feet as revulsive in diseases of the head. *Ainslie.*

Compound Infusion of Horseradish.

℞. Horseradish, one ounce.
Boiling water, one pint.

Infuse for an hour in a close vessel; on cooling, add

Simple syrup, one ounce and a half.

A wineglassful several times a day, in dropsy, especially when arising from a granular affection of the kidneys.

ARNICA.

Wolfsbane.

Several species of this genus are medicinal, but one only is officinal, *A. montana*, a native of Europe; but it is likely that the *A. nudicaulis* of this country is possessed of the same powers.

Sex. Syst. Syngen. super. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1245. Griffith, Med. Bot. 407.

Arnica is a stimulant, acting with much energy on the cerebro-spinal system, and is also an active irritant of the stomach and bowels. In Germany, where it is much employed, it is given to fulfil a variety of indications.

Compound Powder of Arnica.

℞. Powdered arnica root, }
" serpentaria, } two drachms.
" sugar, each, }
Oil of peppermint, ten drops.

Mix, and divide into sixteen powders. *Augustin.*

Dose, a powder, every two hours, in the diarrhœa complicating typhoid fevers.

Extract of Arnica.

℞. Flowers of arnica, one part.
Alcohol of 60 per cent., six parts.

Exhaust by percolation, distil off the alcohol, and evaporate the residue to a proper consistence. *Paris Codex.*

The process of *U. S. Ph.* is nearly identical with this.

Dose, ten grains to a scruple, in chronic rheumatism and paralysis.

Infusion of Arnica.

℞. Flowers of arnica, one ounce.
Boiling water, one pint.

Infuse for half an hour, and strain.

Used in the same cases as the last. Dose, half an ounce to an ounce. *Cottereau.*

Compound Infusion of Arnica.

℞. Flowers of arnica, one drachm.
" chamomile, half an ounce.
Peppermint, two drachms.
Boiling water, nine fl. ounces.

Mix, macerate, and strain. *Copenh. Ph.*

Dose, one ounce.

Fomentation of Arnica.

℞. Flowers of arnica, half an ounce.
Boiling vinegar, sufficient

to obtain six ounces; add

Carbonate of ammonium, two drachms. *Radius.*

Used as a warm fomentation in œdema of the scrotum.

Arnica Plaster.

℞. Extract of arnica, three troyounces.
Resin plaster, six troyounces.
Melt the plaster, add the extract, and mix. *U. S. Ph.*

Decoction of Arnica.

℞. Flowers of arnica, one ounce.
Water, three pints.
Boil till reduced to two pints, strain, and add
Syrup of ginger, two ounces.
Swediaur.

Dose, one to two ounces, every two hours, in aphonia, paralysis, rheumatism, etc.

Fomentation of Arnica and Rue.

℞. Flowers of arnica, two ounces.
Rue, one ounce.
Boiling water, sufficient
to obtain twelve ounces when strained, after one hour of maceration. *Radius.*

Used as a fomentation in contusions.

Tincture of Arnica.

℞. Arnica flowers, bruised, six troyounces.
Alcohol, a pint and a half.
Water, half a pint.
Displace with the mixed liquids, finally using diluted alcohol until two pints are obtained. *U. S. Ph.*

This is very nearly the strength directed by *Paris Codex;* the tincture of *Ph. Germ.* is one-half this strength.

Dose, thirty drops, several times a day.

℞. Arnica root, one ounce.
Rectified spirit, sufficient.
Obtain by maceration and displacement twenty fl. ounces. Dose, one to two fl. drachms. *Brit. Ph.*

These tinctures are much employed externally in contusions, rheumatic pains, etc.

ARSENICUM.

ARSENIC.

Metallic arsenic is not employed in medicine; but several of its combinations are of much importance.

ARSENICI CHLORIDUM.

SOLUTION OF CHLORIDE OF ARSENIC.

℞. Arsenious acid in powder, eighty grains.
Muriatic acid, two fl. drachms.
Water, sufficient.
Boil the arsenic in the muriatic acid, diluted with four ounces of water, until dissolved; then add sufficient water to make twenty fl. ounces. *U. S. Ph.* and *Brit. Ph.*

This is much used in Great Britain in lepra and cholera, in doses of two to eight minims, thrice daily.

Each fl. ounce represents four grains of arsenious acid.

ARSENICI IODIDUM.

IODIDE OF ARSENIC.

℞. Finely-powdered metallic arsenic, one drachm.
Iodine, five drachms.
Triturate together, and introduce into a small flask or test-tube loosely stopped; place this on a sand-bath, and apply gentle heat till liquefaction is produced. The vessel should be nearly full, to prevent the formation of much iodine vapor, and to enable the operator to bring the fixed mass in contact with every part of it, so as to include any iodine that may have been sublimed. If no iodine odor is perceptible, and the contents assume a reddish-yellow color, and crystallize on the sides of the vessel, the operation is complete. *W. Procter.*

This corresponds with the officinal formula.

Dose, one-tenth of a grain, gradually increased to a quarter, three times a day. Given in cancer, and obstinate cutaneous affections.

Iodide of Arsenic Pills.

℞. Iodide of arsenic, one grain.
Extract of conium, twenty grains.
Mix, and make ten pills. *Thomson.*

Used in lepra, and obstinate eruptions.

Iodide of Arsenic Ointment.

℞. Iodide of arsenic, three grains.
Lard, one ounce.
Triturate well. *Biett.*

Employed in cases of lepra, and other cutaneous affections; but requires much caution.

LIQUOR ARSENICI ET HYDRARGYRI IODIDI.

SOLUTION OF IODIDE OF ARSENIC AND MERCURY.

Donovan's Solution.

℞ Iodide of arsenic,
Red iodide of mercury,
each, thirty-five grains.
Distilled water, half a pint.

Rub the iodides with half a fl. ounce of water, and, when they are dissolved, add rest of water, and filter. *U. S. Ph.*

Each fl. drachm contains one-eighth of a grain of arsenic, and one-fourth of a grain of deutoxide of mercury. This preparation is said to be useful in obstinate cutaneous diseases, as lepra, lupus, etc. The dose is from five minims to half a fl. drachm two or three times a day.

Draught of Solution of Iodide of Mercury and Arsenic.

℞ Solution iodide of mercury
and arsenic, two fl. drachms.
Distilled water, three fl. ounces and a half.
Syrup of ginger, half fl. ounce.

Mix, and divide into four draughts. One to be taken night and morning. Not to be given in a metallic spoon. *Donovan.*

ARSENICI TERSULPHURETUM.

ORPIMENT.

Depilatory of Orpiment.

℞ Orpiment, one ounce.
Quicklime, one pound.
Starch, ten ounces.
Water, sufficient

to form a soft paste. *Foy.*

This is spread on the part where it is desired to remove the hair, and washed off when it begins to dry. It is the *rusma* of the Turks.

Delcroix's Depilatory. (Poudre Subtile.)

℞ Orpiment, four parts.
Quicklime thirty parts.
Powdered gum, sixty parts.

Used like the preceding to remove superfluous hair.

Powder of Orpiment.

℞ Orpiment, one ounce.
Quicklime, twelve ounces.
Jasmine powder, ten ounces.
Powder of palm soap, four ounces.

Mix well. *Morfit.*

This, when applied as a depilatory, is mixed with a little water.

Both these, although efficient for the purposes designed, are dangerous, and should never be used, except with extreme caution.

Lotion of Orpiment.

℞ Orpiment, two drachms.
Verdigris, Aloes, Myrrh, each, half a drachm.
Rose water, three fl. ounces.
White wine, six fl. ounces.

Mix. *Van Mons.*

Used as an application to fungous ulcers.

ARTEMISIA.

A genus of bitter herbs, several of which are used as medicinal agents to fulfil various indications; some as tonics (*A. absinthium*), some as moxas (*A. moxa*), and some as anthelmintics. (*See* also Absinthium and Santonica.)

Sex. Syst. Syn. pol. super. *Nat. Syst.* Asteraceæ.

1. A. ABROTANUM.

SOUTHERNWOOD.

A native of the south of Europe and the Levant, and generally cultivated in gardens. Its odor is aromatic and peculiar, and its taste bitter. It is used as a tonic, antispasmodic, and vermifuge.

Linn. Sp. Pl. 1185. Griffith, Med. Bot. 406.

Infusion of Southernwood.

℞ Southernwood, six drachms.
Boiling water, one pint.

Digest for two hours, and strain. Given in hysteria and in dysmenorrhœa. Dose, one fl. ounce. *Taddei.*

Clyster of Southernwood.

℞ Southernwood, half an ounce.
Boiling water, one pint.

Digest for half an hour, and, to six or eight fl. ounces of strained infusion, add

Olive oil, one ounce.

Said to be effectual in cases of worms, and especially ascarides. *Radius.*

2. A. VULGARIS.

Mugwort.

It is a native of Europe and naturalized in a few localities in this country. The herb has a peculiar odor and a bitterish taste. The root is considered the most active part, when collected late in autumn, and is given in epilepsy and similar diseases, in doses of twenty to sixty grains, in the form of powder, infusion, or alcoholic extract.

ARUM.

Indian Turnip.

Several species of Arum are used in medicine, but the only one officinal in the *U. S. Ph.* is *A. triphyllum;* a native plant, with large perennial cormus; this is white, fleshy, and extremely acrid in a fresh state, but becomes edible and bland when dried, and kept for any time; and the fecula obtained from it resembles arrowroot in appearance.

Sext. Syst. Mon. polyand. *Nat. Syst.* Araceæ.

Bigelow, Am. Med. Bot. 1, 52. Griffith, Med. Bot. 616.

The powder of the recently-dried root may be given in doses of ten grains, in an emulsion of gum Arabic, sugar, and water, several times a day. It has been found useful in chronic catarrh, chronic bronchitis, rheumatism, etc.

ASARUM.

Two species of this genus are recognized, one by the *U. S. Ph.*, the other by the *Paris Codex* and *Ph. Germ.*

Sext. Syst. Dodecand. monog. *Nat. Syst.* Aristolochiaceæ.

1. ASARUM EUROPÆUM.

Asarabacca.

A native of Europe, of which the leaves and rhizome are used. The first have a feeble aromatic odor when rubbed, and a somewhat spicy taste; the latter has a strong, penetrating odor, and an acrid, bitter, and nauseous taste; this is sometimes used abroad as a stimulant, emetic, and anthelmintic; the leaves, as the basis of various errhine powders.

Linn. Sp. Pl. 633. Griffith, Med. Bot. 527.

Compound Powder of Asarabacca.

℞. Dried leaves of asarabacca, one ounce.
Lavender flowers, one drachm.

Rub together to a fine powder.

Dublin Ph. 1826.

℞. Powdered asarabacca, } each,
" wood betony, } equal
" marjoram, } parts.

Paris Codex.

Has been found useful as an errhine, in some cases of headache, toothache, etc. Five or six grains to be snuffed up the nostrils at night.

2. ASARUM CANADENSE.

Wild Ginger.

Bigelow, Med. Bot. 1, 150. Barton, Veg. Mat. Med. p. 85.

This species is common to most parts of the United States. The leaves are said by Drs. Barton and Bigelow not to be emetic, but other authorities state that a teaspoonful of this powder never fails to act on the stomach. Like those of the asarabacca, they are eminently errhine. The rhizome is an aromatic stimulant, with active diaphoretic properties, and may be used as a substitute for serpentaria.

Infusion of Wild Ginger.

℞. Root of wild ginger, half an ounce
Boiling water, one pint.

Digest for an hour in a covered vessel, and strain. In all cases where Virginia snakeroot is indicated. Dose, one to two fl. ounces.

ASCLEPIAS.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Asclepiadaceæ.

Many species of this large genus are employed in medicine, and it is probable that the whole of them are endowed with active properties.

1. A. TUBEROSA.

Pleurisy Root.

A native of most parts of the United States. The root is large and irregularly tuberous; the taste of it is bitter, nauseous, and somewhat acrid. It is an active diaphoretic, and, in large doses, purgative. It has attained much popular reputation in the treatment of diseases of the respiratory organs, and more especially of pleurisy. The dose of the powder is from a scruple to a drachm, several times a day. An infusion or decoction is preferable to the powder.

Infusion of Pleurisy Root.

℞ Bruised pleurisy root, one ounce.
Boiling water, two pints.

Digest for two hours. Dose, three or four fl. ounces, warm, to be given every two or three hours, until it operates. *Chapman.*

2. A. INCARNATA.

Swamp Silk Weed.

A native of many parts of the United States, usually growing in wet places. The root is the officinal portion. It is emetic and cathartic in full doses of half a drachm to a drachm, and expectorant and alterative in small ones.

3. A. SYRIACA.

Silk Weed.

This plant, the *A. cornuti* of modern botanists, is very common in the U. S. The root appears to have much the same properties as the last, and also some anodyne powers.

ASPARAGUS.

Asparagus.

Several species of Asparagus have been used in medicine, but the only one that is now employed is the *A. officinalis.* This is a native of Europe, and is generally cultivated there and in this country.

Sex. Syst. Hexand. monog. *Nat. Syst.* Liliaceæ.

Linn. Sp. Pl. 448. Stokes, Bot. Mat. Med., ii. 252. Griffith, Med. Bot. 654.

The parts used are the roots and young shoots (turiones). These are diuretic, aperient, and deobstruent, and have been thought to exercise a sedative influence on the heart. Dr. Wood states (*U. S. Dis.*) that the berries are more efficient than the shoots.

Extract of Asparagus Shoots.

℞ Clarified juice of asparagus, sufficient.

Evaporate by a mild heat to a proper consistence. *Soubeiran.*

Extract of Asparagus Roots.

℞ Roots of asparagus, sufficient.

Bruise them, add sufficient water to cover them, express, strain, and evaporate by a mild heat. *Paris Codex.*

These extracts are given in doses of a scruple to a drachm, as diuretics.

Syrup of Asparagus Shoots.

℞ Juice of asparagus shoots, one pint.
White sugar, two pounds.

Dissolve by means of a water-bath, and strain. *Cottereau.*

Advised in pulmonary catarrh, and too great action of the heart, in doses of one to four ounces during the day.

Decoction of Asparagus Roots.

℞ Asparagus roots, one ounce.
Water, two pints.

Boil and strain. *Radius.*

To be taken by cupfuls in dropsies.

Diuretic Mixture.

℞ Asparagus roots, one ounce.
Water, one pint.

Boil for an hour, strain, and add

Acetate of potassium, twenty grains.
Honey of squills, half an ounce.
Foy.

Used as the last, and in the same diseases.

ASSAFŒTIDA.

Assafetida.

A gum resin or inspissated juice from an umbelliferous plant, a native of Persia, usually thought to be *Ferula assafœtida*, but now shown by Dr. Falconer to be a *Narthex*, which, though similar to Ferula, is distinct from it. (Royle, Mat. Med. 407.)

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Royle, Mat. Med. 407. Griffith, Med. Bot. 326.

Assafetida, as found in the shops, is in masses of a whitish, reddish, or violet hue, composed of adhering tears. Odor, fetid and alliaceous; taste, bitter and somewhat acrid; it forms an emulsion with water.

Is stimulant and antispasmodic, and also emmenagogue and anthelmintic. It is used in spasmodic and convulsive diseases, as hysteria, chorea, hooping-cough, flatulent colic, etc.

Dose, ten grains.

Purified Assafetida.

℞ Assafetida in small pieces, three parts.
Water, two parts.

Digest in a tared capsule until the gum-resin is completely divided, add sufficient stronger alcohol to form with the water of the emulsion a menstruum of sixty per cent. alcoholic strength; boil for a minute,

strain with expression through moderately coarse muslin, and evaporate by means of a water-bath to the proper consistence.

Paris Codex.

Mr. J. B. Moore has proposed to purify assafetida by triturating it into a paste, adding gradually sufficient alcohol, straining from the coarse particles, and evaporating spontaneously.

Assafetida Pills.

℞. Assafetida, seventy-two grains.
Soap, twenty-four grains.

Beat with water into a mass, and divide into twenty-four pills; each of which contains three grains of the gum-resin.

U. S. Ph.

℞. Assafetida, one drachm and a half.
Powdered orris root,
Mucilage of gum Arabic, each, sufficient.

Beat together, and divide into thirty pills. One to be given occasionally in the hooping-cough of children. *Kapp.*

℞. Assafetida, a drachm and a half.
Powdered ginger, half a drachm.
Syrup, sufficient.

Mix, and make thirty pills. Three to be taken every three hours. Have been advised in palsy. *A. T. Tomson.*

Pills of Assafetida and Lactucarium.

℞. Assafetida, three drachms.
Lactucarium, two scruples and a half.

Mix, and divide into eighty pills. Two or three every hour in hooping-cough of adults. *Radius.*

Pills of Assafetida and Iron.

℞. Assafetida,
Sulphate of iron,
Extract of chamomile, } each, half an ounce.

Mix well, and divide into one hundred and eighty pills. Two or more, three or four times a day, in hypochondria and hysteria.

Syfret.

℞. Black oxide of iron, half a drachm
Assafetida, a drachm and a half.
Oil of tansy, ten drops.
Extract of wormwood, sufficient.

Mix, and divide into ninety pills. Six to be taken three times a day. Said to be useful against lumbrici and ascarides.

Phœbus.

Pills of Assafetida and Musk.

℞. Assafetida, two drachms.
Musk,
Camphor, each, one drachm.
Ambergris, half a drachm.

Beat well together, and divide into one hundred pills. Two to be taken three times a day. Said to have proved useful in angina pectoris, hysteria, etc.

St. Marie.

Pills of Assafetida and Opium.

℞. Assafetida, half an ounce.
Powdered opium,
" ipecacuanha, each, four grains.
Oil of peppermint, eight drops.
Alcohol, sufficient.

Beat well together, and divide into one hundred and twenty pills. Ten to be taken three times a day in chronic ischuria, consecutive on gonorrhœa *Radius.*

Assafetida Mixture.

℞. Assafetida, two drachms.
Water, half a pint.

Rub together, adding the water by degrees, till well mixed. *U. S. Ph.*

℞. Assafetida, one drachm.
Sugar, six drachms.
Rose water, five fl. ounces.

Make an emulsion, and add

Hoffmann's anodyne, thirty drops.

Taken in spoonful doses, in spasmodic asthma and hysteria. *Bories.*

Enema of Assafetida.

℞. Assafetida, thirty grains.
Distilled water, four fl. ounces.

Make an emulsion and strain. *Brit. Ph.*

Used in flatulent colic and against ascarides.

Assafetida Mixture.

℞. Assafetida, half a drachm.
Solution of acetate of ammonium, half a fl. ounce.
Pennyroyal water, three fl. ounces.

Mix. One to two spoonfuls in hooping-cough. *Miller.*

℞. Assafetida mixture, five and a half fl. ounces.
Compound spt. of lavender, half fl. ounce.

Aromatic spt. of ammonia, two fl. drachms.

Mix. Three spoonfuls a day in hysteria. *Ainslie.*

℞. Assafetida mixture, two fl. ounces.
Opium, two grains.
Infusion of chamomile, four fl. ounces.

Mix. As an injection in convulsive attacks.

℞. Assafetida, half a drachm.
Yolk of egg, one.

Rub together, and gradually add

Water, eight fl. ounces.

Strain. To form two injections. Said to be useful in the hooping-cough of children. *Soubeiran.*

Compound Assafetida Mixture.

℞. Assafetida, one drachm.
Peppermint water, three fl. ounces.

Make a solution, and add

Ammoniated tincture of valerian, two fl. drachms.
Tincture of castor, three fl. drachms.
Sulphuric ether, one fl. drachm.

Mix. Useful in hysteria, in doses of a tablespoonful, largely diluted, every second hour. *Ellis.*

Mixture of Assafetida and Oxymel of Squill.

℞. Assafetida, one scruple.
Powdered digitalis, six grains.
Oxymel of squill, two fl. ounces.
Linden-flower water, four fl. ounces.

Rub well together. Said to be found useful in the dry cough consequent on deranged menstruation. *Pierquin.*

Dose, a tablespoonful.

Mixture of Assafetida and Tolu.

℞. Assafetida, one drachm.
Water, four fl. ounces.

Make an emulsion, and add

Tincture of tolu, half a fl. ounce.
" opium, forty to fifty drops.

Mix well. A teaspoonful every two hours, in hooping-cough, and a dessertspoonful or more to an adult. *Ellis.*

Syrup of Assafetida.

℞. Assafetida, one ounce.
Boiling water, one pint.
Sugar, two pounds.

Rub the assafetida with a part of the boiling water till a uniform paste is made. Then gradually add the rest of the water, strain, and add the sugar, applying a gentle heat to dissolve it.

Dose, a tablespoonful, which contains seven grains and a half. *Richard Peltz.*

Tincture of Assafetida.

℞. Assafetida, four troyounces.
Alcohol, two pints.

Macerate for fourteen days, and filter. *U. S. Ph.*

The tincture of *Brit. Ph.* is nearly identical; *Paris Codex* and *Ph. Germ.* direct one part of assafetida to five parts of alcohol. Dose, a teaspoonful.

Compound Water of Assafetida. (Fetid Anti-hysteric Water.)

℞. Assafetida, twelve parts.
Galbanum, eight parts.
Myrrh, six parts.
Valerian, sixteen parts.
Zedoary, sixteen parts.
Angelica, four parts.
Peppermint, twelve parts.
Wild thyme, eight parts.
Roman chamomile, eight parts.
Castor, one part.

Cut and bruise and macerate for twenty-four hours, with

Alcohol, sp. gr. 0.892, one hundred and fifty parts.

Then add

Water, three hundred parts.

Distil three hundred parts. *Ph. Germ.*

Dose, a tablespoonful in hysteria.

Ethereal Tincture of Assafetida.

℞. Assafetida, one part.
Spirit of ether, five parts.

Macerate for ten days and filter, keeping the funnel covered. *Paris Codex.*

Has all the properties of the gum resin, but is more stimulating. Dose, a fl. drachm.

Alkaline Tincture of Assafetida.

℞. Assafetida,
Carbonate of potassium, each, two ounces.
Diluted alcohol, one pint.

Macerate for three days, by a mild heat,

and filter. Anti-hysteric, etc. Useful in nervous disorders. Dose, about twenty drops. *Wirtemberg Disp.*

Ammoniated Spirit of Assafetida.

℞ Ammoniated alcohol, sixteen ounces.
Assafetida, one ounce.

Macerate for twenty-four hours, in a closed vessel, and then distil sixteen ounces. *Van Mons.*

Stimulant and anti-hysteric. Dose, five to sixty drops.

Tincture of Assafetida and Castor.

℞ Tincture of assafetida,
" castor, each, one fl. ounce.
Aromatic spirit of ammonia, one fl. drachm.

Mix. In hysteria, etc. Dose, about a teaspoonful. *Ellis.*

Tincture of Assafetida and Soot.

℞ Assafetida, one drachm.
Wood soot, two drachms.
Alcohol, three fl. ounces.

Digest for six days, and filter. *Guibourt.*

Highly praised in hysteria, flatulence, and convulsions caused by dentition. Dose, ten to thirty drops in an appropriate vehicle.

Assafetida Plaster.

℞ Assafetida
Lead plaster, each, twelve troyounces.
Galbanum,
Yellow wax, each, six troyounces.
Alcohol, three pints.

Dissolve the assafetida and galbanum in the alcohol, by means of a water-bath; strain while hot, and evaporate to consistence of honey, add lead plaster and wax melted together; stir well, and evaporate to due consistence. *U. S. Ph.*

℞ Yellow wax,
Burgundy pitch, each, two parts.

Melt, strain, and when nearly cool, add

Powdered assafetida, three parts.
" ammoniac, one part,

previously dissolved in

Common turpentine, two parts.

Mix well. *Ph. Germ.*

A good application to the stomach in hysteria with flatulence, and to the chest in hooping-cough.

Dewees's Carminative.

℞ Carbonate of magnesium, half a drachm.
Tincture of assafetida, sixty drops.
" opium, twenty drops.
Sugar, one drachm.
Distilled water, one fl. ounce.

Mix well. *Dewees.*

Very useful in the flatulent colic, diarrhœa, etc., of infants. Dose, twenty-five drops to a child of two to four weeks old, increasing the dose for those of a more advanced age.

Suppositories of Assafetida.

℞ Tincture of assafetida, one fl. ounce.
Oil of theobroma, 320 grains.

Evaporate the tincture in a moderately warm place spontaneously until reduced to a syrupy consistence, mix this with a drachm of the oil, and afterwards with the remaining oil, previously melted and cooled again to 95°. Make twelve suppositories. *U. S. Ph.*

ATROPIA.

ATROPIA.

℞ Powdered belladonna root, forty-eight troyounces.
Chloroform, four troyounces and a half.
Alcohol, sufficient.

Exhaust the powder by percolation with alcohol, distil to four pints, acidulate with sulphuric acid, evaporate to half a pint, add an equal bulk of water, and filter. Agitate with one-third of the chloroform and a slight excess of solution of potassa; separate the heavier solution and treat the watery liquid in same manner with the remainder of the chloroform in two portions, lastly evaporate the mixed chloroformic solutions spontaneously. *U. S. Ph.*

The process of *Brit. Ph.* is similar, but the atropia is purified yet by animal charcoal.

Sulphate of Atropia.

℞ Atropia, sixty grains.
Strong ether, four and a half fl. ounces.
Sulphuric acid, six grains.
Stronger alcohol, one fl. drachm.

Dissolve atropia in ether; mix acid and alcohol, and drop into first solution until neutralized. When the sulphate has been deposited, decant and dry. *U. S. Ph.*

R. Atropia, two drachms.
Distilled water, four fl. drachms.
Diluted sulphuric acid, sufficient.

Mix atropia and water, neutralize with the acid, and evaporate to dryness by a heat not exceeding 100°. *Brit. Ph.*

Solution of Atropia.

R. Atropia, four grains.
Alcohol, one fl. drachm.
Distilled water, seven fl. drachms.

Dissolve the atropia in the alcohol and add this gradually to the water. *Brit. Ph.*

Employed like the next.

Solution of Sulphate of Atropia.

R. Sulphate of atropia, four grains.
Distilled water, one fl. ounce.

Dissolve. *Brit. Ph.*

For hypodermic injection, and as an application to the eyes for dilating the pupil. One or two drops will generally dilate the *pupil, if dropped* between the lids. Two minims contain $\frac{1}{60}$, three minims, $\frac{1}{40}$ grain of sulphate of atropia.

Syrup of Atropia.

R. Atropia, one part.
Syrup, ten thousand parts.

Dissolve the atropia in one hundred parts of water acidulated with one part of muriatic acid, then mix with the syrup.
Bouchardat.

Tincture of Atropia.

R. Atropia, fifteen grains.
Alcohol (85 per cent.), ten fl. drachms.

Mix. Dose, one to three drops.
Bouchardat.

Ointment of Atropia.

R. Atropia, eight grains.
Rectified spirit, half a fl. drachm.
Prepared lard, one ounce.

Dissolve the atropia in the spirit, and mix thoroughly with the lard. *Brit. Ph.*

AURANTIUM.

Orange.

Citrus vulgaris, the bitter, and *C. aurantium*, the sweet orange, are natives of Asia, but now cultivated in all warm climates; the two species are considered merely as varieties by some botanists.

Sex. Syst. Polydelph. icosand. *Nat. Syst.* Aurantiaceæ.

Lind. Fl. Med. 163. Griffith, Med. Bot. 165.

Almost every part is employed in medicine, but only the rind of the fruit and the flowers are officinal in the *U. S. Ph.*

AURANTII CORTEX.

Orange-Peel.

Powder of Orange-Peel and Rhubarb.

R. Powdered orange-peel,
" rhubarb,
Bitartrate of potassium,
each, one ounce.

Mix well. Dose, one or two teaspoonfuls a day. In dyspepsia, with a costive condition of the bowels. *Radius.*

Confection of Orange-Peel.

R. Fresh sweet orange-peel, grated, one pound.
White sugar, three pounds.

Beat together, till thoroughly mixed.
U. S. Ph.

As a vehicle or adjunct to powders.

Electuary of Orange-Peel.

R. Orange-peel, half an ounce.
Willow bark, two drachms.
Syrup of orange-peel, sufficient.

Make an electuary. To be taken in divided doses, during the apyrexia of intermittent fever. *Phœbus.*

Orange Wine.

This is a wine made in Britain by the fermentation of a saccharine solution, to which the fresh peel of the bitter orange has been added. *Brit. Ph.*

Tincture of Orange-Peel.

R. Bitter orange-peel, in powder, No. 50, four troyounces.
Diluted alcohol, sufficient.

Obtain by displacement two pints.
U. S Ph.

The tincture of *Brit. Ph.* is nearly one-fourth weaker; *Paris Codex* and *Ph. Germ.* direct one part of the peel to five parts of 60 per cent. alcohol.

Used principally as an addition to infusions, decoctions, etc.

Spirit of Orange-Peel.

℞. Fresh orange-peel, five parts.
Alcohol (80 per cent), thirty parts.

Macerate for two days, add some water, and distil thirty parts. *Paris Codex.*

Used for the same purposes as the last.

Elixir of Orange-Peel.

℞. Orange-peel, one ounce.
Cascarilla, half an ounce.
Water of citron-peel,
" wormwood,
Alcohol, each, half a pint.

Digest for four days, and filter. *Moscati.*

Dose, from four to six fl. drachms, as a carminative and stomachic.

Infusion of Orange-Peel.

℞. Bitter orange-peel, cut, half an ounce.
Boiling distilled water, ten ounces.

Macerate for fifteen minutes, and strain. *Brit. Ph.*

Compound Infusion of Orange-Peel.

℞. Bitter orange-peel, cut, half an ounce.
Fresh lemon-peel cut, two drachms.
Bruised cloves, one drachm.
Boiling distilled water, twenty ounces.

Macerate for a quarter of an hour, and strain. *Brit. Ph.*

This preparation is used as a stomachic, in the dose of one or two fl. ounces.

Compound Tincture of Orange Berries.
(Bitter Tincture.)

℞. Orange berries, Centaury, Gentian, each, two parts.
Zedoary, one part.
Alcohol (0.892), thirty-five parts.

Digest for eight days, express, and filter.

Dose, one to four fl. drachms. *Ph. Germ.*

Extract of Orange-Peel.

℞. Bitter orange-peel, one part.

Exhaust by digesting for three days, first with four parts, afterwards with two parts of diluted alcohol; mix the expressed liquids, filter, and evaporate to the proper consistence. *Ph. Germ.*

Dose, ten to twenty grains.

Syrup of Orange-Peel.

℞. Sweet orange-peel, recently dried, and in fine powder, two troyounces.

Obtain by slow percolation with alcohol six fl. ounces of tincture, evaporate it at a temperature not over 120°, to two fl. ounces, add

Carbonate of magnesium, half a troyounce.
Sugar, one troyounce.

Rub them together, add gradually half a pint of water, filter, and having added enough water to make the filtrate measure a pint, dissolve in it, with the aid of a gentle heat,

Sugar, twenty-seven troyounces.

Strain. *U. S. Ph.*

℞. Bitter orange-peel, cut, two parts.
Good white wine, fourteen parts.

Macerate for two days, express, filter, and to eleven parts of the filtrate add

White sugar, eighteen parts.

Dissolve. *Ph. Germ.*

The syrup of *Brit. Ph.* is a mixture of one fl. ounce of the tincture with seven fl. ounces of simple syrup. *Paris Codex* directs as menstruum, water mixed with one-tenth of 60 per cent. alcohol.

Simple Elixir.

℞. Fresh orange-peel, two drachms.
Star anise, half a drachm.
Cardamom, one scruple.
Simple syrup, six fl. ounces.
Caramel, ten grains.

Reduce orange-peel to a pulp, add aromatics in fine powder, displace with diluted alcohol to obtain six fl. ounces, add remaining ingredients, and then enough water to make one pint. An agreeable vehicle. *O. Eberbach.*

AURANTII FOLIA.

Orange Leaves.

Electuary of Orange Leaves.

℞. Orange leaves,
Valerian, each, half a drachm.
Syrup of orange-peel, sufficient.

Make an electuary. *Radius.*

A teaspoonful occasionally as an antispasmodic.

Jelly of Orange Leaves.

℞ Orange leaves, an ounce and a half.
Boiling water, two pints.

Digest for twenty-four hours, strain, and add

Powdered salep, two drachms.

Boil to a jelly, and add

Wine,
Syrup of orange flowers,
each, one fl. ounce.

In teaspoonful doses, in marasmus. *Radius.*

AURANTII FLORES.

Orange Flowers.

Confection of Orange Flowers.

℞ Orange flowers, one part.
Syrup, three parts.

Evaporate to proper consistence. *Taddei.*

Pastilles of Orange Flowers.

℞ Sugar,
Orange-flower water,
each, two ounces.

Dissolve and evaporate to consistence of honey; add a mixture of

Sugar, four ounces.
Oil of orange flowers,
half a drachm.

Make pastilles. *Cottereau.*

Orange-Flower Water.

℞ Frosh orange flowers, ten parts.
Water, sufficient.

By means of steam, distil off twenty parts, and separate the oil. *Paris Codex.*

℞ Fresh orange
flowers, forty-eight troyounces.
Water, sixteen pints.

Mix, and by means of steam, distil eight pints. *U. S. Ph.*

The oil which floats upon the distillate is the *oil of neroli* or *oil of orange flowers.*

Syrup of Orange Flowers.

℞ Orange-flower
water, twenty fl. ounces.
Sugar, thirty-six troyounces.

Dissolve in a close vessel, with the aid of a gentle heat. *U. S. Ph.*

AURANTII FRUCTUS.

Orange Berries.

Both the unripe and ripe fruit are used.

Syrup of Oranges.

℞ Clarified orange juice, four parts.
Sugar, seven parts.

Dissolve. *Paris Codex.*

Compound Orange Elixir.

℞ Orange berries, bruised, six parts.
Cinnamon, bruised, two parts.
Carbonate of potassium, one part.
Sherry wine, fifty parts.

Macerate for eight days, express, filter, and add

Extract of gentian, " wormwood, " bogbean, " cascarilla, } each, one part.

Dissolve, let settle, and filter. *Ph. Germ.*

This is the *Elixir viscerale Hoffmanni,* much used in Europe in dyspepsia in doses of twenty to sixty minims.

AURUM.

Gold.

Gold is used as a remedial agent in its pure state, but only in an infinitely divided form, in which it is stated that it acts on the system, and to be equally efficacious as its salts, but its action is much milder. It has been prescribed in various forms of syphilitic diseases, in doses of a quarter of a grain to a grain, three or four times a day.

Powder of Gold.

℞ Gold leaf, one part.
Sulphate of
potassium, eight to ten parts.

Triturate thoroughly, wash out the sulphate of potassium, and sift through fine gauze. *Paris Codex.*

To be applied in friction on the gums and tongue.

℞ Dilute solution of nitro-
muriate of gold, at will.
Solution sulphate of
iron, sufficient

to precipitate; collect this, and dry. *Tromsdorff.*

℞. Pulverized gold, six grains.
Starch, sixty-six grains.
Mix, and divide into twelve powders. One to be given four times a day. *Riecke.*

℞. Pulverized gold,
Lycopodium, each, two grains.
Mix. To be rubbed, during the day, on the tongue. *Riecke.*

Syrup of Gold.

℞. Pulverized gold, twenty-four grains.
Syrup, one ounce.
Mix. As an application to chancres on the fauces. *Bories.*

Ointment of Gold.

℞. Pulverized gold, one drachm.
Lard, half an ounce.
Triturate well. As a dressing to venereal ulcers, and also to a surface having the cuticle removed; when the surface becomes dry, substitute the ointment of chloride of gold. *Legrand.*

AURI CHLORIDUM.

CHLORIDE OF GOLD.

℞. Leaf gold,
Nitric acid, sp. gr. 1.32, each, one part.
Muriatic acid, sp. gr. 1.17, three parts.
Dissolve by aid of a sand-bath, and evaporate till vapors of chlorine are given off, and set aside to crystallize. Dose, one-twentieth to one-sixteenth of a grain. *Paris Codex.*

℞. Pure gold, one part.
Nitro-muriatic acid (made with three parts muriatic acid, one part nitric acid, and one of water), two parts.
Put the gold in a porcelain capsule, and add the acid; cover with a plate of glass, and place on a salt-water bath. Continue heat till nitrous fumes are no longer evolved. Raise the glass by means of a fold of paper, and continue heat, till, on introducing a glass rod, the adhering chloride of gold becomes solid on cooling. Remove from fire, and let crystallize. *Leval.*

Powder of Chloride of Gold.

℞. Chloride of gold, one part.
Powdered orris root, two parts.
Mix. In frictions on the gums, in the dose of a fifteenth to a tenth of a grain. *Foy.*

Bolus of Chloride of Gold.

℞. Chloride of gold, half a grain.
Extract of aconite, twelve grains.
Mix, and make six boluses. One to be taken three times a day. *Brera.*

Pills of Chloride of Gold.

℞. Chloride of gold, ten grains.
Powdered liquorice, three drachms.
Syrup, sufficient.
Mix, and make one hundred and fifty pills. One, thrice a day. *Ellis.*

Tincture of Chloride of Gold.

℞. Leaf gold, one drachm.
Nitro-muriatic acid, one ounce.
Dissolve, and add
Oil of rosemary, two ounces.
Alcohol, eight ounces.
Mix. Dose, ten drops. *Spielmann.*

Caustic of Chloride of Gold.

℞. Chloride of gold, one ounce.
Nitro-muriatic acid, one fl. ounce.
Mix. Used as a caustic to the surface of cancerous ulcers, applied by means of a dossil of lint. *Recamier.*

Collyrium of Chloride of Gold.

℞. Chloride of gold, two grains.
Distilled water, six fl. ounces.
Dissolve. As a collyrium in ophthalmia. *Jahn.*

Ointment of Chloride of Gold.

℞. Chloride of gold, eight grains.
Lard, half an ounce.
Mix. To relieve rheumatic pains. *Legrand.*

AURI ET SODII CHLORIDUM.

CHLORIDE OF GOLD AND SODIUM.

℞. Leaf gold,
Nitric acid, sp. gr. 1.32, each, ten parts.
Muriatic acid, sp. gr. 1.17, thirty parts.
Chloride of sodium, three parts.
Prepare the chloride of gold by the formula given above, dissolve it in distilled water, add the chloride of sodium, evaporate to a pellicle, and let crystallize. *Paris Codex.*

The *Germ. Ph.* proceeds nearly the same, but directs for sixty-five parts of metallic gold one hundred parts of chloride of sodium, so that the product contains half its weight of chloride of gold.

Powder of Chloride of Gold and Sodium.

R. Chloride of gold and sodium, one part.
Lycopodium, two parts.
Mix. *Cadet.*

R. Chloride of gold and sodium, one part.
Sugar of milk, sixteen parts.
Mix. *Radius.*

R. Chloride of gold and sodium, three parts.
Powdered orris root, nine parts.
Mix. Three grains contain about three-fourths of a grain of the chloride, and are used for thirty frictions, for the weakest doses, and three for the strongest. *Legrand.*

Pills of Chloride of Gold and Sodium.

R. Chloride of gold and sodium, ten grains.
Potato starch, four grains.
Gum Arabic,
Distilled water, each, one drachm.
Mix, and make one hundred and twenty pills. Each contains one-twelfth of a grain of chloride. *Soubeiran.*

R. Chloride of gold and sodium, four grains.
Extract of bitter-sweet, one drachm.
Extract of aconite, ten grains.
Powdered marsh mallow,
Distilled water, each, sufficient.
Mix, and make eighty pills. Dose, three thrice a day, in dropsy, incontinence of urine, amaurosis, etc. *Groetzner.*

R. Chloride of gold and sodium, one grain.
Extract of mezereon, one drachm.
Mix, and make sixty pills. *Magendie.*

Lozenges of Chloride of Gold and Sodium.

R. Chloride of gold and sodium, five grains.
Powdered sugar, one ounce.
Mucilage of tragacanth, sufficient.
Rub the chloride in a glass mortar with the sugar, add the mucilage, and make sixty lozenges. *Soubeiran.*

Solution of Chloride of Gold and Sodium.

R. Chloride of gold and sodium, two grains.
Distilled water, one ounce.
Dissolve. Ten drops, every two hours, in dropsy and incontinence of urine. *Radius.*

Syrup of Chloride of Gold and Sodium.

R. Chloride of gold and sodium, one grain.
Syrup, six ounces.
Dissolve. Dose, from half an ounce to an ounce. *Bories.*

Compound Syrup of Chloride of Gold and Sodium.

R. Peruvian bark,
Gentian, each, three ounces.
Mezereon, one ounce and a half.
Foxglove, two drachms and a half.
Water, one pint and a half.
Boil down to one pint, and pour the boiling decoction on
Bitter orange peel, one ounce.
Cloves, half an ounce.
After a sufficient infusion, strain, and add
Chloride of gold and sodium, four grains.
A spoonful, night and morning. *Bories.*

Ointment of Chloride of Gold and Sodium.

R. Chloride of gold and sodium, one scruple.
Lard, one ounce.
Mix well. *Foy.*

R. Chloride of gold and sodium, three to four grains.
Lard, half an ounce.
Mix thoroughly. *Groetzner.*

AURI CYANIDUM.

Cyanide of Gold.

R. Leaf gold, one part.
Nitro-muriatic acid, six parts.
Dissolve, and evaporate to dryness. Dissolve in

Distilled water, eight parts.

Reduce on a water-bath to one-fourth, and add very gradually

Cyanide of potassium, half a part.
Distilled water, twenty-four parts.

Agitate, let rest, and separate the cyanide of gold. *Soubeiran.*

℞. Fresh precipitated oxide of gold (washed, but not dried), at will.
Diluted hydrocyanic acid, sufficient.

Boil till solution assumes a beautiful yellow tint, evaporate to dryness on a water-bath. *Desfosses.*

Dose, from eighteenth to tenth of a grain.

Powder of Cyanide of Gold.

℞. Cyanide of gold, one grain.
Lycopodium, fifteen grains.

Mix, and divide into sixteen powders. One every day, as friction on the gums and tongue. *Radius.*

Pills of Cyanide of Gold.

℞. Cyanide of gold, one grain.
Powdered liquorice, thirty-one grains.
Mucilage, sufficient.

Mix, and make sixteen pills. *Radius.*

℞. Cyanide of gold, one grain.
Extract of mezereon, three grains.
Powdered marsh mallow, sufficient

to make fifteen pills. Dose, one pill twice a day.

Lozenges of Cyanide of Gold.

℞. Cyanide of gold, one grain.
Chocolate, sufficient

to make sixteen lozenges. *Soubeiran.*

Solution of Cyanide of Gold.

℞. Cyanide of gold, three grains.
Diluted alcohol, eight fl. ounces.

A teaspoonful, twice a day, gradually increasing the dose. *Christien.*

AURI IODIDUM.

Iodide of Gold.

℞. Solution of chloride of gold, at will.
Solution of iodide of potassium, sufficient

to precipitate; wash the precipitate with alcohol, and dry it. *Old Paris Codex.*

℞. Solution chloride of gold, at will.
" iodide of ammonium, sufficient

to precipitate. Wash with alcohol, and dry. *Miellet.*

Used like the other preparations, and in the same doses.

AURI OXIDUM.

Oxide of Gold.

℞. Chloride of gold, one part.
Distilled water, forty parts.

Dissolve, and add

Fresh calcined magnesia, four parts.

Boil; wash the precipitate with distilled water, then with nitric acid diluted with twenty parts of water, and again with water. Dry in the shade. *Dorvault.*

Dose, from a tenth to three-fourths of a grain.

Powder of Oxide of Gold.

℞. Oxide of gold, two drachms.
Sulphuret of antimony, half an ounce.
Oil of cinnamon, eight drops.

Triturate together. *Spielmann.*

℞. Oxide of gold, four scruples.
Prepared hartshorn, one ounce.

Triturate together. Used in malignant fevers and smallpox. *Spielmann.*

Pills of Oxide of Gold.

℞. Oxide of gold, five grains.
Extract of mezereon, two drachms.

Mix, and make sixty pills. *Magendie.*

AURUM AMMONIATUM.

Ammoniated Gold.

℞. Gold leaf, two drachms.
Nitro-muriatic acid, one ounce.

Dissolve, and add

Water of ammonia, sufficient

to precipitate. Wash and dry, with great caution. *Niemann.*

This is what is termed fulminating gold, and explodes at 400° F. It has been used in fevers, etc., as a diaphoretic, but has produced unpleasant consequences.

Pills of Ammoniated Gold.

℞. Ammoniated gold, } each,
Calomel, } half a
Extract of squill, } drachm.

Powdered rhubarb, two drachms.
Conserve of juniper, sufficient.
Mix, and make pills of two grains.
Plenck.

AURUM STANNO-PARATUM.

Purple of Cassius.

℞. Chloride of gold, one part.
Distilled water, two hundred parts.
Add to this solution, very gradually,
Pure tin, one part.
Nitro-muriatic acid, three parts.
Dissolve without heat, and add
Distilled water, one hundred parts,
as long as any precipitate falls. Wash this and dry by a gentle heat.
Paris Codex, 1839.
This is used like the other preparations of gold.

AVENA SATIVA.

Oat.

The common oat, although generally cultivated from a very early age, is not known in a wild state.
Sex. Syst. Triand. digyn. *Nat. Syst.* Graminaceæ.
Linn. Sp. Pl. 61. Griffith, Med. Bot. 662.
Though for the most part used as food for horses, it contains much nutritive matter, and forms an important article of diet in some parts of Europe. It is also employed in medicine as a bland, nutritious, and somewhat laxative nutriment in inflammatory diseases. When the grains are merely freed from their husk and coarsely broken, they are called groats.

Groat Gruel.

℞. Groats, three ounces.
Wash well in cold water, and then put into
Fresh water, four pints.
Boil slowly to one-half, and strain through a fine sieve. *A. T. Thomson.*

℞. Groats, five drachms.
Liquorice root, three drachms.
Boil the groats in sufficient water to have one quart of decoction, add the liquorice, and after a sufficient infusion, strain.
Cottereau.

Oatmeal Gruel.

℞. Oatmeal, two ounces.
Water, one pint and a half.
Rub the meal in a basin, with the back of a spoon, in some of the water, pouring off the fluid after the grosser particles have subsided, but whilst the milkiness remains; repeat this with fresh water. Stir well, and unite the washings, and boil until a soft, thick mucilage is formed.
A. T. Thomson.
Both these preparations may be flavored according to circumstances.

Compound Decoction of Oatmeal.

℞. Groats, six ounces.
Red saunders, chipped, one ounce.
Chicory root, one ounce and a half.
Water, twelve pints.
Boil down one-third, and add to the strained decoction
Nitre, half an ounce.
Sugar, two ounces.
Dissolve. Advised in gout, nephritis, etc., to be taken hot or tepid, morning and evening, for some weeks, in doses of six or eight fl. ounces. *Wirt. Ph.*

Flummery of Oatmeal.

℞. Oatmeal or groats, a quart.
Rub for a considerable time with two quarts of hot water, and let the mixture stand till it becomes sour, then add another quart of hot water, and strain through a hair sieve. Let stand till a white sediment is deposited, decant the fluid, and wash the sediment with cold water. This is now to be boiled with fresh water, till it forms a mucilage, stirring the whole time. It is a very light and somewhat nutritious food, during early convalescence. *A. T. Thomson.*

Powder for a Cataplasm.

℞. Linseed meal, one part.
Oatmeal, two parts.
Dub. Ph. 1826.
℞. Powder for a cataplasm, at will.
Boiling water, sufficient.
Mix for a poultice. *Dub. Ph.* 1826.

Oatmeal Poultice.

℞. Oatmeal, sufficient.
Stir gradually into water kept boiling, until it is sufficiently consistent.
A. T. Thomson.

AZEDARACH.

AZEDARACH—(PRIDE OF CHINA.)

The *Melia Azedarach* is a tree, a native of many parts of Asia, and naturalized in the warmer parts of Europe and the United States.

Sex. Syst. Hexand. monog. *Nat. Syst.* Meliaceæ.

Linn. Sp. Pl. 550. Griffith, Med. Bot. 179.

The parts used are the bark of the root, the berries, and the leaves. The former only is officinal in the U. S. Pharm. It is cathartic and emetic; in large doses somewhat narcotic; it is also an efficient anthelmintic.

Decoction of Azedarach.

℞. Azedarach, four ounces.
Water, two pints.

Boil to a pint, and strain. *Wood.*

Dose, one fl. ounce, every two or three hours, for a child.

Ointment of Azedarach Berries.

℞. Pulp of berries,
Lard, each, one ounce.

Rub well together. Said to be useful as an application in tinea capitis.

B.

BALLOTA LANATA.

HAIRY HOREHOUND.

Several species of *Ballota* have at different times been used in medicine, but this is the only one that appears to possess active properties.

Sex. Syst. Didynam. gym. *Nat. Syst.* Lamiaceæ.

The whole plant is used, with the exception of the root, and is stated to be an excellent diuretic, and useful in dropsical cases.

Decoction of Hairy Horehound.

℞. Hairy horehound, one ounce and a half.
Boiling water, two pints.

Boil down to one pint. Dose, a cupful twice a day, gradually increasing the quantity. *Rehmann.*

BALSAMUM PERUVIANUM.

BALSAM OF PERU.

This balsam is the product of *Myrospermum Peruiferum*, or of *Myroxylon Pereiræ*, a large tree indigenous to South America, where it is called *quinquino*.

Sex. Syst. Decand. monog. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 233. Griffith, Med. Bot. 248.

The balsam is a thick, viscid fluid, of a dark, reddish-brown color, an agreeable, fragrant odor, and a warm, bitterish taste, occasioning a pungent sensation in the throat. It is stimulating, tonic, and expectorant, and has been much used in pectoral complaints, etc., and also externally as an application to indolent ulcers. The dose is about half a fl. drachm.

Pills of Balsam of Peru.

℞. Balsam of Peru, one drachm.
Extract of bitter polygala, two drachms.
Marsh mallow, sufficient

to make one hundred and twenty pills. Ten, four times a day, in chronic mucous discharges. *Schubert.*

Acoustic Balsam.

℞. Balsam of Peru, half a drachm.
Narcotic oil,
Onion juice, each, one ounce.

Mix. A dossil of cotton saturated with this oil is to be introduced into the deaf ear, provided there is no inflammation or violent pain.

℞. Beef gall, three fl. drachms.
Balsam of Peru, one fl. drachm.

Mix. To be occasionally dropped into the ear to correct a fetid discharge, syringing it also, daily, with a weak solution of soap and water. *Hugh Smith.*

Liniment for Chilblains.

℞. Balsam of Peru, half a drachm.
Muriatic ether,
Laudanum, each, two drachms.

Mix. As a friction. *Henschel.*

Mamillary Lotion.

℞. Balsam of Peru, one drachm.
Yolk of egg, one.
Spirit of wild thyme, three ounces.

Mix. The sore nipple is to be bathed with this, and then sprinkled with a powder, composed of one drachm of Peruvian bark, and two drachms of gum Arabic. *Iverg.*

Balsam of Peru Mixture.

℞ Balsam of Peru, two drachms.
Yolk of egg, one.
Extract of cinchona, two drachms.
Honey of roses, three ounces.

Mix. Two dessertspoonfuls, four times a day, in chronic mucous discharges. *St. Marie.*

℞ Balsam of Peru, half a drachm.
Mucilage of gum Arabic, sufficient.
Cinnamon water,
Water, each, half a fl. ounce.

Mix. To be taken three or four times a day, as an expectorant in chronic catarrh. *Ellis.*

Tincture of Balsam of Peru.

℞ Balsam of Peru, one part.
Alcohol, five parts.

Macerate for ten days, and filter. *Paris Codex.*

Principally used as an external application to ulcers, etc.

Syrup of Balsam of Peru.

℞ Balsam of Peru, one part.
Water, eleven parts.

Digest for several hours, frequently shaking; cool, decant, filter, and to ten parts of the filtrate add

Sugar, eighteen parts.

Make a syrup. Dose, one to four fl. drachms. *Ph. Germ.*

Balsam of Peru Collutory.

℞ Tincture of balsam of Peru, one part.
Tincture of guaiacum, four parts.

Mix. A teaspoonful to a glass of water, to rinse the mouth. *Taddei.*

Oleo-balsamic Mixture.

℞ Oil of lavender,
" cloves,
" cinnamon,
" thyme,
" lemon,
" mace,
" orange flowers, } each, one part.
Balsam of Peru, three parts.
Alcohol two hundred and forty parts.

Macerate for a week, shaking frequently, and filter. *Ph. Germ.*

Known as *Hoffmann's Balsam of Life.* Dose, ten to thirty drops on sugar or in wine.

Locatelli's Balsam.

℞ Olive oil, six ounces.
Yellow wax, four ounces.
Wine, five fl. ounces.

Melt together by a gentle heat, till all moisture is evaporated, and add

Venice turpentine, six ounces.
Balsam of Peru, two drachms.
Red saunders, half an ounce.

Mix. Formerly used in phthisis, but now employed only as an external application. This is the original formula. *Spielmann.*

Ointment of Balsam of Peru.

℞ Balsam of Peru,
Spermaceti ointment, equal parts.

Mix. As a dressing to painful ulcers. *Radius.*

Compound Ointment of Balsam of Peru.

℞ Lard, two ounces.
White wax, four drachms.

Melt in a water-bath, and add

Balsam of Peru, two drachms.
Oil of lavender, twelve minims.

As an application to promote the growth of the hair. *Copland.*

Plaster of Balsam of Peru.

℞ Powdered carbonate of lead, sixteen parts.
Powdered litharge, eight parts.
Rose oil, forty-eight parts.
White wax, thirty-two parts.

Melt together, and, at close of operation, add

Balsam of Peru, two parts.

As an application to indolent ulcers. *Foy.*

BALSAMUM TOLUTANUM.

Balsam of Tolu.

This is the balsamic exudation of *Myrospermum* (*Myroxylon*) *toluiferum*, a large tree (of which little is known) growing in several parts of South America.

Sex. Syst. Decand. monog. *Nat. Syst.* Fabaceæ.

De Candolle, Prod. ii. 95. Griffith, Med. Bot. 250.

As first obtained, the balsam is soft and tenacious, but it gradually becomes hard and brittle; then it is transparent, shining, of a yellowish, or reddish-brown color, of a fragrant odor, and a sweetish, warm taste. It is a stimulating expectorant. The dose is from ten to thirty grains.

Lozenges of Tolu.

℞. Balsam of Tolu, one ounce.
Alcohol, one fl. ounce.

Dissolve and add

Water, two fl. ounces.

Heat in a water-bath, and filter; add

Tragacanth, five scruples.
Sugar, twenty ounces.

Beat into a paste, and make lozenges of fifteen grains. *Paris Codex.*

Tincture of Tolu.

℞. Balsam of Tolu, three troyounces.
Alcohol, two pints.

Macerate till dissolved, then filter. *U. S. Ph.*

Tincture of Tolu of *Brit. Ph.* contains one-fourth more Tolu than the preceding; that of *Paris Codex* is twice this strength.

A highly stimulating expectorant. Dose, one to two fl. drachms.

Compound Tincture of Tolu.

℞. Balsam of Tolu, two ounces.
Balsam of Peru, one ounce.
Benzoic acid,
Saffron, each, half an ounce.
Alcohol, twenty-four fl. ounces.

Digest for three days, and filter. *Spielmann.*

Tincture of Tolu with Foxglove.

℞. Tincture of Tolu, one fl. ounce and a half.
Elixir of vitriol, half a fl. drachm.
Tincture of foxglove, one fl. drachm.
Antimonial wine, two fl. drachms.
Clarified honey, one fl. ounce and a half.
Powdered liquorice, half a drachm.
Distilled water, six fl. ounces.

Mix. A tablespoonful, according to circumstances. *Ellis.*

Emulsion of Tolu.

℞. Balsam of Tolu, three drachms.
" Mecca, eight drops.
Sweet almonds, half an ounce.
Barley water, eighteen fl. ounces.
Sugar, six drachms.

Make an emulsion. A spoonful occasionally, in chronic catarrh, etc. *Spielmann.*

Syrup of Tolu.

℞. Tincture of Tolu, two fl. ounces.
Carbonate of magnesium, two drachms.
Water, one pint.
Sugar, twenty-six troyounces.

Rub the tincture with the carbonate and two troyounces of the sugar, then with the water gradually added, and filter; add the remainder of the sugar, dissolve with a gentle heat, and strain. *U. S. Ph.*

℞. Tincture of Tolu, one and a half fl. ounces.
Sugar, (troy) two and a half pounds.
Water, one pint.

Mix the tincture with one pound of sugar, in a shallow dish, and allow the alcohol to evaporate spontaneously. Then add the remainder of the sugar, and dissolve it in twelve fl. ounces of the water. Beat up the white of an egg with the remaining four ounces of water, add it to the syrup, boil for a minute or two, and strain through flannel. *J. Laidley.*

℞. Balsam of Tolu, one ounce and a quarter.
Boiling water, sufficient.
Sugar, thirty-two ounces.

Boil the balsam in water for half an hour, occasionally stirring; when cold filter to obtain one pint, add the sugar, and form syrup. *Brit. Ph.*

Mixture of Tolu and Morphia.

℞. Oxymel of squill, one ounce and a half.
Syrup of Tolu, half an ounce.
Acetate of morphia, half to one grain.

Mix. A teaspoonful, as occasion may require, in catarrh. *Ellis.*

Mixture of Tolu and Belladonna.

℞. Syrup of Tolu, three fl. ounces and a half.
" seneka, half a fl. ounce.
Extract of belladonna, eight to twelve grains.
Wine of ipecacuanha, one fl. drachm.

Mix. A teaspoonful three or four times a day, in cough. *Ellis.*

Mixture of Tolu and Almond Emulsion.

℞. Almond emulsion, fifteen parts.
Syrup of Tolu, one part.
Mix. In cough. *Béral.*

Mixture of Tolu and Copaiba.

℞. Balsam of Tolu,
Copaiba,
Powdered gum Arabic, each, half an ounce.
Elixir of vitriol, twenty drops.
Distilled water, six fl. ounces.
Mix. A tablespoonful occasionally, in chronic hooping-cough. *Ellis.*

Tolu Mixture.

℞. Tincture of Tolu, one ounce.
Laudanum, two drachms.
Tincture of foxglove, one drachm.
Mix. In the chronic cough of hæmoptysis. Forty to fifty drops, every three or four hours. *Dewees.*

Mixture of Tolu and Opium.

℞. Balsam of Tolu, one drachm.
Powdered gum Arabic, one drachm and a half.
Water, four fl. ounces.
Syrup of opium, half a fl. ounce.
Make an emulsion. *Niemann.*

Inhalation of Tolu.

℞. Balsam of Tolu, one ounce.
Boiling water, one pint.
Mix. The vapor to be inhaled. *Ellis.*

BAPTISIA TINCTORIA.

Wild Indigo.

A native plant, found in most parts of the country; becoming black when dried.

Sex. Syst. Decand. monog. *Nat. Syst.* Fabaceæ.

Torrey and Gray, Flor. i. 386. Griffith, Med. Bot. 231.

The root, which is the part used, is emetic and purgative when fresh. Has been considered a valuable antiseptic and febrifuge, and has been given with advantage in typhus fever, scarlatina, etc., and also used as a wash to foul ulcers, aphthæ, etc. Most employed in decoction.

Decoction of Wild Indigo.

℞. Root of wild indigo, one ounce.
Boiling water, a pint and a half.
Boil down to a pint. Dose, half a fl. ounce every four to eight hours. *Comstock.*

Ointment of Wild Indigo.

℞. Contused root of wild indigo, two ounces.
Lard, six ounces.
Simmer together for an hour and strain. Has been found beneficial as an application to burns and ulcers.

BARIUM.

BARII ACETAS.

Acetate of Barium.

℞. Carbonate of barium, at will.
Acetic acid, sufficient
to saturate; filter, evaporate, and crystallize. *Van Mons.*

Solution of Acetate of Barium.

℞. Acetate of barium, one part.
Distilled water, nine parts.
Dissolve, and filter. In same cases and doses as the solution of baryta. *Hamb. Ph.*

BARII CARBONAS.

Carbonate of Barium.

℞. Native sulphate of barium (heavy spar), four parts.
Fused chloride of calcium, two parts.
Charcoal, one part.
Reduce separately to a fine powder, mix intimately and heat to redness, as long as the blue flame of carbonic oxide is observed. Boil with water, filter, and crystallize. Redissolve the crystals in distilled water, precipitate with solution of pure carbonate of sodium, wash, and dry. *Duflos.*

May be used in doses of one-eighth to a quarter of a grain; but is chiefly employed for preparing the soluble salts of barium.

BARII CHLORIDUM.

Chloride of Barium.

℞ Carbonate of barium,
Muriatic acid, each, four troyounces.
Water, one pint.

Mix the acid with the water, and gradually add the baryta; towards the close of effervescence, apply a gentle heat, and, when action has ceased, filter, and evaporate for crystals to form. *U. S. Ph.*

Powders of Chloride of Barium.

℞ Chloride of barium, two drachms.
Calomel, ten grains.
Sulphuret of antimony, six grains.

Mix, and divide into forty-eight powders. Dose, two a day in syrup, in cutaneous affections. *Swediaur.*

Pills of Chloride of Barium.

℞ Chloride of barium,
Extract of liquorice,
each, half a drachm.
Powdered liquorice root,
Water, each, sufficient.

Mix, and divide into one hundred and twenty pills. *Phœbus.*

Dose, four to eight, three or four times a day.

℞ Chloride of barium, one drachm.
Resin of guaiacum, half an ounce.
Conserve of fumitory, sufficient.

Mix, and make one hundred and eighty-eight pills. One to be taken morning and evening, increased to two, against tapeworm. *Pierquin.*

Solution of Chloride of Barium.

℞ Chloride of barium, one troyounce.
Distilled water, three fl. ounces.

Dissolve, and filter. *U. S. Ph.*

Has been used in small doses in cancer and scrofula. Dose, five drops, two or three times a day, cautiously increasing.

Collyrium of Chloride of Barium.

℞ Chloride of barium, ten grains.
Distilled water, one ounce.

Dissolve, filter, and add

Mucilage of quince seeds, two drachms.
Wine of opium, half a drachm.

Radius.

The eyelids are to be washed several times a day with this, in scrofulous ophthalmia.

Mixture of Chloride of Barium.

℞ Chloride of barium,
" iron, each, half a drachm.
Distilled water, one ounce.

Dissolve. *Augustin.*

Dose, twenty to sixty drops.

℞ Chloride of barium,
Extract of cicuta,
each, half a drachm.
Distilled water, half an ounce.
Antimonial wine, one drachm and a half.

Phœbus.

Dose, fifteen to twenty drops every three hours, in chronic orchitis.

℞ Chloride of barium, one drachm.
Balm water, seven fl. drachms.
Antimonial wine, one fl. drachm.

Dose, twenty to thirty drops four times a day. *Hufeland.*

℞ Chloride of barium, four grains.
Distilled water, two fl. ounces.
Extract of hemlock, four grains.
Common emulsion, one pound.
Syrup, one ounce.

Mix. To be taken during the day, in scrofula, and scrofulous phthisis. *Brera.*

BARII IODIDUM.

Iodide of Barium.

℞ Iodine, one hundred parts.
Iron filings, thirty parts.
Water, sufficient.

Prepare an iodide of iron, add baryta dissolved in twenty parts of water, as long as a precipitate is formed, heat a moment, filter, evaporate, and crystallize. *Magendie.*

Has been used with success in scrofula. Dose, one-eighth of a grain, three times a day, cautiously increasing.

Powder of Iodide of Barium.

℞ Iodide of barium, one grain.
Powdered cinnamon,
Sugar, each, four scruples.

Mix well, and divide into eight powders. One to be given two or three times a day in scrofula. *Radius.*

Ointment of Iodide of Barium.

R. Iodide of barium, four grains.
Lard, one ounce.

Mix. As a friction in scrofulous swellings. *Biett.*

BARII SULPHURETUM.

SULPHURET OF BARIUM.

R. Sulphate of barium, eleven parts.
Charcoal, one part.
Oil of turpentine, sufficient.

Triturate the sulphate with the coal, moisten the mixture with the turpentine, and heat the whole in a crucible to redness; let cool, and preserve. *Van Mons.*

BARYTA.

BARYTES.

R. Nitrate of barium, sufficient.

Expose in a platina crucible to a red heat. When the mass has become solid and porous, raise to a white heat, remove from fire, and cool. *Van Mons.*

Solution of Barytes.

R. Baryta, one part.
Distilled water, twenty parts.

Dissolve. *Van Mons.*

Has been recommended in scrofula, in doses of four to five drops, in some appropriate vehicle.

Barytic Liniment.

R. Solution of baryta, one part.
Olive oil, six parts.

Rub together. *Soubeiran.*

Advised as an external application in lepra, and other obstinate cutaneous diseases.

BEBERIA.

BEBEERINA.

This is an alkaloid obtained from bebeeru bark, the bark of the greenheart tree, growing in British Guiana. It belongs to the genus *Nectandra*, and has been named *N. Rodiæi*. The bark is in flat pieces, smooth, grayish, hard, heavy, and brittle, with but little odor, though of a very bitter taste. Bebeerina is extracted from this bark in the form of a sulphate, by a process similar to that used to obtain sulphate of quinia. In this form it contains both bebeerina and siperina, and is in thin, somewhat glittering scales of a dark brownish color, forming a yellow powder, soluble in cold water, but often forming a turbid solution, which is rendered clear by a few drops of diluted sulphuric acid. Pure bebeerina can be obtained from this solution as follows:—

Decompose by ammonia, wash the precipitate, and whilst moist, triturate with moist hydrated oxide of lead; dry on a water-bath, exhaust with alcohol, and distil off the spirit, treat the residue with ether; on the evaporation of the ether, bebeerina will be left of a bright canary-yellow color, but in powder appears nearly white.

Dose of the sulphate is one to three grains as a tonic, and five grains to a scruple as a febrifuge.

It is not equal to quinia as an antiperiodic, but is a good substitute for that article.

Bebeeru bark is rarely if ever used in medicine in this country, but may be employed similar to cinchona, and in larger doses.

Pills of Sulphate of Bebeerina.

R. Sulphate of bebeerina, two drachms.
Conserve of roses, sufficient.

Mix, and form twenty-four pills—one to three, thrice a day in intermittent fevers. *Christison.*

Solution of Sulphate of Bebeerina.

R. Sulphate of bebeerina, half a drachm.
Diluted sulphuric acid, twenty-five minims.
Syrup,
Tincture of orange-peel, each, one fl. ounce.
Water, four fl. ounces.

Mix. A tablespoonful three times a day. *Christison.*

BECCABUNGA.

BROOKLIME.

Two species of *Veronica* of similar properties are included under this name, the *V. beccabunga* and *V. anagallis;* they are both semi-aquatic plants, indigenous to Europe and to this country.

Sex. Syst. Diand. monog. *Nat. Syst.* Scrophulariaceæ.

Griffith, Med. Bot. 517.

These plants are employed usually in a fresh state, and considered to be antiscorbutic and alterative. They are usually given in infusion made with one or two handfuls of the herb to a pint of boiling water. They have also been employed in conserve, syrup, etc.

Water of Brooklime.

R. Brooklime,
Water, each, two parts.

Distil off one part. *Cottereau.*
Dose, one to four ounces.

Decoction of Brooklime.

℞. Fresh brooklime, three ounces.
Water, one pint.

Boil for fifteen minutes and strain.
Copland.

Syrup of Brooklime.

℞. Clarified juice of brooklime, one part.
Sugar, two parts.

Dissolve, by means of a water-bath.
Taddei.

BELA.

Bael. Bengal Quince.

The fruit of *Ægle Marmelos*, a large tree of Coromandel and Malabar.

Sex. Syst. Polyan. Monogyn. *Nat. Syst.* Aurantiaceæ.

It is globular, of the size of an orange, with a hard, almost woody rind. It is usually met with in slices or fragments, consisting of the rind with some dried pulp and seeds adhering to it; it has a slight balsamic odor, and a bitterish astringent taste; the pulp is mucilaginous. It is used as a tonic and astringent, mostly in the form of fluid extract.

Fluid Extract of Bael.

℞. Bael fruit, sixteen ounces.
Distilled water, twelve pints (imp.)
Rectified spirit, two fl. ounces.

Macerate the bael for twelve hours in one-third of the water; pour off the clear liquor; repeat the maceration a second and third time for one hour in the remaining water; press the marc, and filter the mixed liquids through flannel. Evaporate to fourteen fl. ounces, and when cold add the spirit. Dose, one to two fl. drachms. *Brit. Ph.*

BELLADONNA.

Belladonna.

This is the *Atropa belladonna*, an herbaceous plant, native of Europe, and cultivated in some places in the United States.

Sex. Syst. Pentad. monog. *Nat. Syst.* Solanaceæ.

Linn. Sp. Pl. 260. Griffith, Med. Bot. 486.

The root and leaves are officinal, some pharmacopœias allowing the young branches to be collected with the leaves. The entire plant is powerfully narcotic, owing to the presence of the alkaloid *Atropia*. (*See* page 156). It has been used in a variety of diseases as an anodyne, antispasmodic, and discutient. The dose of the powdered leaves is one to two grains, daily or twice a day, gradually increasing. But it is more usually given in the form of an extract.

Powder of Belladonna.

℞. Powdered belladonna root, three grains.
Powdered ipecacuanha, two grains.
Oxide of zinc, six grains.
Sugar, one drachm.

Rub together, and divide into six powders. One every two hours in epilepsy. *Radius.*

℞. Powdered belladonna root, two grains.
Powdered ipecacuanha, one grain.
Washed sulphur, thirty-two grains.
Sugar of milk, two drachms.

Rub well together, divide into twenty powders. One every three hours in hooping-cough. *Phœbus.*

℞. Powdered belladonna, one grain.
" nitrate of potassium, twenty-one grains.
" sugar, nine grains.

Make a powder, to be taken at bedtime.

In chronic rheumatism, extensive ulcerations, mania, and epilepsy. *A. T. Thomson.*

℞. Powdered root of belladonna,
" ipecacuanha, each, six grains.
" liquorice root,
" sugar, each, half a drachm.
Precipitated sulphur, two scruples.
Oil of anise,
" amber, each, three minims.

Mix, and make five to twenty powders.
A. T. Thomson.

℞. Powdered leaves of belladonna, one to three grains.
Musk,
Camphor, each, five grains.
Sugar, thirty grains.

Triturate well together, and divide into eight powders. *A. T. Thomson.*

Powder of Belladonna and Rhubarb.

℞. Powdered belladonna leaves, ten grains.
Powdered rhubarb, two scruples.

Mix, and divide into ten powders. One powder, two or three times a day, in obstructions of the liver and spleen.

Radius.

Opiated Belladonna Leaves.

℞ Belladonna leaves,
Water, each, two ounces.
Extract of opium, one drachm.

Dissolve the opium in the water, wash the leaves with the solution, and dry them by a gentle heat. *Guibourt.*

Said to be very useful in phthisis, the patient to smoke a pinch every morning in a common pipe.

Fumigation of Belladonna.

℞ Powdered belladonna, one drachm.
Boiling infusion of sage, one quart.

The steam to be inhaled. Said to be useful in hooping-cough and phthisis.

Soubeiran.

Extract of Belladonna.

℞ Belladonna leaves, one pound.

Bruise in a stone mortar, with the addition of a little water; express the juice, heat to boiling point, strain, and evaporate to proper consistence. *U. S. Ph.*

Paris Codex operates in same manner, but cools and strains concentrated juice previous to final inspissation. *Brit. Ph.* separates first the chlorophyll, afterwards the albumen, and when of a syrupy consistence, adds again the chlorophyll. *Germ. Ph.* separates chlorophyll and albumen by heat, concentrates the liquid, and removes mucilaginous constituents by alcohol.

Dose, half to one grain night and morning, to be gradually increased.

Alcoholic Extract of Belladonna.

℞ Belladonna leaves, in fine powder, twenty-four troyounces.
Alcohol, four pints.
Water, two pints.
Diluted alcohol, sufficient.

Moisten the leaves with a pint of the mixed alcohol and water, pack in a displacement apparatus, and add gradually the remainder of mixture. Continue percolation with diluted alcohol until six pints of tincture have passed. Distil off alcohol, and evaporate to proper consistence. *U. S. Ph.*

Dose, quarter to half a grain, to be gradually increased.

Compound Belladonna Pills.

℞ Extract of belladonna, } each,
Blue pill, } twelve
Powdered ipecacuanha, } grains.

Mix and make twelve pills. One to be taken morning and evening, in cancerous affections. *Ainslie.*

Pills of Belladonna and Camphor.

℞ Camphor, three drachms.
Assafetida, three drachms.
Extract of belladonna, one drachm.
Extract of opium, fifteen grains.
Syrup of gum Arabic, sufficient.

Mix, and make one hundred and twenty pills. Give one pill the first day, two the second, and so on till six are given daily, in hysteria. *Debreyne.*

Solution of Extract of Belladonna.

℞ Extract of belladonna, three grains.
Cinnamon water, one fl. ounce.

Make a solution. Dose for a child under one year, two or three drops twice or thrice a day, and an additional drop for each additional year. *Ellis.*

Said to have proved efficacious as a preventive of scarlatina.

Infusion of Belladonna.

℞ Belladonna leaves, four grains.
Boiling water, two fl. ounces.

Infuse. Take one-half as a dose. *Paris.*

℞ Belladonna leaves, half a drachm.
Water, seven fl. ounces.

Infuse, strain, and add

Compound tincture of cardamom, one fl. ounce.

Dose, a tablespoonful. *Saunders.*

Syrup of Belladonna.

℞ Extract of belladonna, forty-eight grains.
Distilled water, two fl. ounces.

Dissolve and filter, then add

Syrup, three pounds.

Boil, and strain. *Cottereau.*

Said to be useful in hooping-cough in doses of one to three drachms.

Gillet's Syrup of Belladonna.

℞ Dried belladonna leaves, one ounce.

Digitalis,
Common nightshade, each, one drachm.
Water, ten fl. ounces.

Digest for two days, and filter, then add

Syrup, two pounds.

Cadet.

Advised in hooping-cough, in the dose of a teaspoonful every hour or two.

Tincture of Belladonna.

℞. Belladonna leaves, four troyounces.
Diluted alcohol, sufficient.

Obtain by percolation two pints. *U. S. Ph.*

Tincture of belladonna of *Brit. Ph.* is two-fifths the strength, and that of *Paris Codex* nearly one-fourth stronger than the above.

℞. Fresh belladonna leaves with the flowering branches, five parts.
Alcohol, sp. gr. 0.892, six parts.

Bruise the belladonna in a stone mortar; macerate with the spirit for eight days, express, and filter. *Ph. Germ.*

The dose is from fifteen to thirty drops.

Ethereal Tincture of Belladonna.

℞. Belladonna leaves, dried, one part.
Sulphuric ether, eight parts.

Macerate for eight days, and filter.

Guibourt.

Fluid Extract of Belladonna Root.

℞. Belladonna root, powdered, No. 50, sixteen troyounces.

Moisten with one-fourth of a mixture composed of twelve fl. ounces of alcohol, three of glycerin, and one of water, pack well into a percolator, add the remainder of the mixture, and macerate for four days. Displace with diluted alcohol twenty-four fl. ounces; reserve the first fourteen fl. ounces, add to the remaining tincture one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with the reserved portion. *U. S. Ph.*

Belladonna Mixture.

℞. Extract of belladonna, eight to twelve grains.
Wine of ipecacuanha, one fl. drachm.
Syrup of seneka, half fl. ounce.
" tolu, three and a half fl. ounces.

Mix. Advised in catarrh, in the dose of a teaspoonful, three or four times a day, using also gum-water acidulated with lemon-juice.

Ellis.

℞. Extract of belladonna, fifteen grains.
Fennel water, five fl. ounces.
Alcohol, one fl. drachm.

Dissolve. Dose, a drop for every year of the age of a child, not to exceed fifteen; as a preventive of scarlatina. *Maisier.*

Liniment of Belladonna.

℞. Powdered belladonna root, twenty ounces.
Camphor, one ounce.
Rectified spirit, sufficient.

Macerate the powder with a portion of the spirit for three days; then displace slowly into a receiver containing the camphor, until the product measures a pint (twenty fl. ounces). *Brit. Ph.*

℞. Extract of belladonna, two scruples.
Sulphuric ether, one fl. drachm.
Cherry-laurel water, two fl. ounces.

Mix. As a friction to the abdomen in colica pictonum. *Phœbus.*

Oleo-infusion of Belladonna.

℞. Bruised fresh belladonna leaves, one part.
Olive oil, two parts.

Heat by means of a slow fire, until the moisture has evaporated, express, and filter. As an addition to liniments. *Paris Codex.*

Suppositories of Belladonna.

℞. Alcoholic extract of belladonna, six grains.
Cacao butter, three hundred and fifty-four grains.

Rub extract into a smooth paste with a little water, afterwards with sixty grains of cacao butter, mix thoroughly with remainder of cacao butter previously melted and cooled to 95°, and make twelve suppositories. *U. S. Ph.*

Clyster of Belladonna.

℞. Belladonna leaves, twelve to twenty grains.
Powdered jalap, one scruple.
Boiling water, half a pint.

Infuse, and strain. *Pitschaft.*

This has been recommended in strangulated hernia, to overcome spasm.

Plaster of Belladonna.

R. Powdered belladonna root, sixteen troyounces.
Alcohol,
Resin plaster, each, sufficient.

Exhaust the powder with the alcohol, distil and evaporate the tincture, and add to the extract sufficient resin plaster previously melted, to make the weight of the mixture sixteen troyounces. *U. S. Ph.*

Brit. Ph. exhausts three ounces of extract with alcohol, evaporates, and mixes with same quantity of resin plaster.

R. Purified elemi, two parts.
Wax, one part.
Alcoholic extract of belladonna, nine parts.

Melt and mix. *Paris Codex.*

R. Yellow wax, four parts.
Common turpentine,
Olive oil, each, one part.

Melt together, and when nearly cold, add
Powdered belladonna leaves, two parts.

Mix. *Ph. Germ.*

An efficacious application in neuralgic and rheumatic pains.

Cerate of Belladonna.

R. Extract of belladonna, one part.
Galien's cerate, nine parts.

Mix thoroughly. *Paris Codex.*

Ointment of Belladonna.

R. Extract of belladonna, one drachm.
Water, thirty minims.
Lard, seven drachms.

Mix. *U. S. Ph.*

Brit. Ph. directs eighty grains of extract to one ounce avoir. of lard; *Germ. Ph.* one drachm of extract to nine drachms of wax ointment.

BENZOINUM.

Benzoin

Is the solid balsam or balsamic resin of the *Styrax Benzoin*, a tree of some size, native of several of the East Indian Islands. *Sex. Syst.* Decand. monog. *Nat. Syst.* Styracaceæ.

Dryander, Ph. Trans. lxxvii. 308. Griffith, Med. Bot. 439.

There are several varieties of benzoin, but the best is in whitish tears, united by a reddish-brown connecting medium. It has an aromatic, agreeable odor, and a somewhat acrid taste. It is stimulant and expectorant, and is much used in chronic catarrhs. Inhalation of the fumes has been recommended in hoarseness and aphonia.

Benzoinated Lard or Ointment.

R. Benzoin in coarse powder, one ounce.
Lard, forty-four ounces.

Heat them together in a water-bath for two hours, strain without pressure, and stir while cooling. *Brit. Ph.*

R. Tincture of benzoin, two fluidounces.
Lard, sixteen troyounces.

Apply the heat of a water-bath, constantly stirring, until the alcohol has evaporated, then stir while cooling. *U. S. Ph.*

Employed for ointments to prevent them from becoming rancid when long kept.

Fumigating Powder.

R. Powdered olibanum, two pounds.
" benzoin,
" storax, each, half a pound.
" dried roses,
" lavender flowers, each, six ounces.

Mix. A small quantity to be thrown on hot coals, to raise a smoke; to be inhaled in hooping-cough, etc. *Dohrn.*

Fumigating Pastilles.

R. Benzoin, ten parts.
Charcoal, twenty-four parts.
Nitrate of potassium, one part.
Sassafras, two parts.
Mucilage of gum Arabic, sufficient

to make pastilles, which are to be conical. *Béral.*

R. Benzoin, sixteen parts.
Sandal wood, four parts.
Laudanum, one part.
Balsam of tolu, four parts.
Charcoal, forty-eight parts.
Nitrate of potassium, two parts.
Mucilage of tragacanth, sufficient.

Make conical pastilles. *Foy.*

Powder of Benzoin.

R. Powdered benzoin,
" sugar candy, equal parts.

Mix. Said to be useful with camphor water in asthma and chronic catarrh.
Pierquin.

Oil of Benzoin.

R. Benzoin, at will.
Water, a small quantity.

Distil on a sand-bath, and separate the oil that passes over.

Advised as a friction in neuralgic and rheumatic pains. *Swediaur.*

Cosmetic Wash of Benzoin.

R. Tincture of benzoin, three fl. drachms.
Liquid carbonate of potassium, two fl. drachms.
Rose water, eight fl. ounces.

Mix. As a lotion in acne. *Augustin.*

Cosmetic Emulsion of Benzoin.

R. Almond paste, two drachms.
Rose water, eight fl. ounces.

Make an emulsion, and add

Tincture of benzoin, three fl. drachms.
Schubarth.

Milk of Roses.

R. Tincture of benzoin, one fl. drachm.
Rose water, one pint.

Mix. *Taddei.*

R. Tincture of benzoin, one fl. drachm.
" tolu, twenty drops.
Rose water, one pint.

Mix. *Giannini.*

Both these are used as cosmetic washes.

Lotion for Burns.

R. Benzoin, six drachms.
Storax, four drachms.
Balsam tolu, two drachms.
Aloes, one drachm.
Alcohol, eight fl. ounces.

Make a tincture, to be used as a lotion for burns and scalds, before vesication has taken place.

Tincture of Benzoin.

R. Benzoin, six troyounces.
Alcohol, two pints.

Macerate for seven days, and filter.
U. S. Ph.

Used as a stomachic, carminative, etc., in doses of ten to twenty drops; externally, diluted, as a cosmetic.

Compound Tincture of Benzoin.

R. Benzoin, three troyounces.
Storax, two troyounces.
Balsam tolu, one troyounce.
Socotrine aloes, half a troyounce.
Alcohol, two pints.

Macerate for seven days, and filter.
U. S. Ph.

The formula of *Brit. Ph.* closely resembles the above.

A stimulating expectorant, and also used as an application to indolent ulcers. Dose, twenty to sixty drops.

Turlington's Balsam.

R. Benzoin, twelve ounces.
Liquid storax, four ounces.
Balsam of Peru, two ounces.
Myrrh,
Aloes, each, one ounce.
Balsam of tolu,
Extract of liquorice, each, four ounces.
Angelica root, half an ounce.
Alcohol, eight pints.

Digest for ten days, and strain. Used as a vulnerary. *Phil. Coll. Ph.*

BERBERIS.

Barberry.

One species of this genus, *B. vulgaris*, has been employed in medicine. It is a native of Europe, but is naturalized in some parts of the United States.

Sex. Syst. Hexand. monog. *Nat. Syst.* Berberidaceæ.

Torrey and Gray, Fl. i. 49. Griffith, Med. Bot. 112.

The parts used are principally the berries, which are acidulous, and form a substitute for tamarinds, in the preparation of cooling drinks. The bark of the root is bitter and astringent, and is useful in the treatment of aphthous sore mouth, and was at one time much esteemed in the treatment of jaundice.

A bitter, crystallizable alkaloid, called berberina, has been obtained from the root. This is tonic in doses of two or three grains. The same alkaloid is found in many other plants, and is now principally obtained from hydrastis.

Lemonade of Barberries.

R. Juice of berries, one part.
Sweetened water, fifteen parts.

Mix. As a refreshing drink in fevers.
Béral.

Infusion of Barberry.

℞ Barberry bark, one ounce.
Boiling water, one pint.

Macerate for two hours.

Used in jaundice. Dose, one fl. ounce.
Copland.

BISMUTHUM.

BISMUTH.

The *Brit. Ph.* directs the metal to be purified by fusing it with one-fifth of its weight of saltpetre.

BISMUTHI ET AMMONII CITRAS.

CITRATE OF BISMUTH AND AMMONIUM.

Solution of Ammonio-citrate of Bismuth.

℞ Powdered bismuth, four hundred and thirty grains.
Nitric acid, two fl. ounces.
Citric acid, two ounces.
Solution of ammonia,
Distilled water, each, sufficient.

Mix the nitric acid with an ounce of the water, add the bismuth gradually, and when effervescence has ceased, heat for ten minutes nearly to ebullition. Decant and evaporate the solution to two fl. ounces, add the citric acid previously dissolved in four ounces of the water, and afterwards solution of ammonia in small quantities, until the precipitate formed is redissolved and the solution is neutral or slightly alkaline to test paper; then dilute with distilled water to the volume of one pint (twenty fl. ounces). One fl. drachm contains three grains of oxide of bismuth. Dose, half to one fl. drachm. *Brit. Ph.*

BISMUTHI SUBCARBONAS.

SUBCARBONATE OF BISMUTH.

℞ Bismuth, in pieces, two troyounces.

Dissolve in a mixture of four and a half troyounces of nitric acid and four fl. ounces of water, dilute the solution with ten fl. ounces of distilled water, and, after twenty-four hours, filter. Dilute the filtrate with four pints of distilled water, and add five fl. ounces of ammonia water diluted with an equal bulk of water. Collect the precipitate, wash, drain, and dissolve it in four troyounces of nitric acid. Add the clear liquid to a solution of ten troyounces of carbonate of sodium in twelve fl. ounces of distilled water, drain, wash, and dry the precipitate. *U. S. Ph.*

It is tasteless, and readily soluble in acids with effervescence. Used as a tonic in gastric and intestinal affections. Dose, ten to sixty grains daily in divided doses.

Pills of Subcarbonate of Bismuth.

℞ Subcarbonate of bismuth, two scruples.
Confection of roses, sufficient.

Mix and make twenty pills. One after each meal, in dyspepsia and sick headache.
Hammond.

BISMUTHI SUBNITRAS.

SUBNITRATE OF BISMUTH.

℞ Bismuth, in pieces, two troyounces.
Nitric acid,
Carbonate of sodium, each, ten troyounces.
Water of ammonia, six fl. ounces.
Distilled water, sufficient.

Proceed by the process for subcarbonate of bismuth, omitting the first precipitation by water and ammonia. Dissolve the washed carbonate in five and a half troyounces of nitric acid, add four fl. ounces of water, and after twenty-four hours, filter. Dilute the filtrate with four pints of distilled water, slowly add the water of ammonia with constant stirring; collect, wash, and dry the precipitate. *U. S. Ph.*

Used as a tonic and antispasmodic, especially in certain painful affections of the stomach. Dose, five grains, twice or thrice a day, gradually increasing the quantity.

Compound Bismuth Powder.

℞ Subnitrate of bismuth, twelve grains.
Powdered ipecacuanha, two grains.
Carbonate of magnesium, two drachms.

Mix, and form twelve powders. One, two or three times a day, in gastrodynia.
Clarus.

℞ Subnitrate of bismuth, eight grains.
Opium, one grain.
Sugar, two drachms.

Mix, and form four powders. *Ammon.*

Much praised by the author in cholera; one powder to be taken every two hours.

Powders of Subnitrate of Bismuth.

℞. Subnitrate of bismuth, three to six grains.
Sugar, ten grains.

Make six powders. Place one powder on the tongue of a child (one year old), three or four times daily. Used in the diarrhœa of children. *Trousseau.*

Pills of Subnitrate of Bismuth.

℞. Subnitrate of bismuth, one drm.
Mucilage of gum Arabic, sufficient.

Mix, and make thirty pills. One to be given every two hours, in dyspepsia. *Ellis.*

Troches of Subnitrate of Bismuth.

℞. Subnitrate of bismuth, one part.
Sugar, nine parts.

Mix, form a mass with mucilage of tragacanth, and divide into troches of fifteen grains each. *Paris Codex.*

Compound Troches of Subnitrate of Bismuth.

℞. Subnitrate of bismuth, fourteen hundred and forty grs.
Carbonate of magnesium, four ounces avoir.
Precipitated carbonate of calcium, six ounces avoir.
Refined sugar, twenty-nine ounces avoir.
Gum Arabic, in powder, one ounce avoir.
Mucilage of gum Arabic, two fl. ounces.
Rose water, sufficient.

Mix the dry ingredients, add the mucilage, form a mass with rose water, and divide into seven hundred and twenty lozenges.

Dose, one to six. These are the *bismuth lozenges* of the *Brit. Ph.*

Lotion of Subnitrate of Bismuth.

℞. Subnitrate of bismuth, twenty grains.
Glycerin, one fl. ounce.
Rose water, six fl. ounces.

Mix. In erythematous conditions of the tongue. *Symonds.*

Glycerite of Bismuth.

℞. Subnitrate of bismuth,
Glycerin, each, equal parts.

Mix. Applied to the inflamed surface in chronic granular conjunctivitis and in blepharitis. *Follin.*

℞. Subnitrate of bismuth, one drachm.
Glycerin, three drachms.

Mix. Applied to fissures of the anus and to chapped nipples, etc. *Trousseau.*

Subnitrate of Bismuth Ointment.

℞. Subnitrate of bismuth, one part.
Lard, three parts.

Rub well together. Said to be useful in psora, and other cutaneous eruptions. *Kerksig.*

Ointment of Tannin and Bismuth.

℞. Yellow wax, strained, one troyounce.
Linseed oil, three troyounces.

Melt together, stir, and add

Tannic acid, one drachm.
Subnitrate of bismuth, twenty grains.

Mix thoroughly. Recommended as an application to burns. *Binkerd.*

BISMUTHI TANNAS.

TANNATE OF BISMUTH.

℞. Crystallized nitrate of bismuth, eleven drachms.

Dissolve in water with the aid of a little nitric acid, and pour the solution gradually into an excess of caustic soda solution, wash the precipitate well, and triturate it with

Tannic acid, five drachms.

Wash the product upon a strainer with water and dry it with a gentle heat. *Dorvault.*

A yellowish insoluble and tasteless powder; given in diarrhœa in doses of ten to thirty grains; it is readily suspended in mucilage or syrup.

BISMUTHI VALERIANAS.

VALERIANATE OF BISMUTH.

℞. Subnitrate of bismuth, thirty-two parts.

Form a thin pulp with sufficient distilled water, and add solution of

Carbonate of sodium, twelve parts.
Distilled water, thirty parts.
Valerianic acid, nine parts.

Agitate the mixture at a moderate heat, for an hour, cool, collect the precipitate upon a filter, wash with cold water, and dry.
Ph. Germ.

A white insoluble powder, having the odor of valerianic acid. Dose, one to five grains.

BISTORTA.

Bistort.

This is the root of the *Polygonum Bistorta*, a native of Europe, and also found in the northern parts of this country, growing in wet situations.

Sex. Syst. Octand. trigyn. *Nat. Syst.* Polygonaceæ.

Linn. Sp. Pl. 516. Lindley, Fl. Med. 361.

The part employed is the root; this is bitter and austere, especially in a fresh state. It is a powerful astringent, but is seldom used in this country. The dose of the powder is twenty or thirty grains, three or four times a day.

Infusion of Bistort.

℞ Bistort, one ounce.
Boiling water, two pints.

Infuse for two hours, and strain. Recommended in passive hemorrhages. *Radius.*

Astringent Clyster.

℞ Bistort, one ounce.
Poppy heads, two drachms.
Water, one pint.

Infuse, and strain. As an injection, in diarrhœa and chronic dysentery.
Guibourt.

Extract of Bistort.

℞ Powdered bistort, one pound.
Water, sufficient.

Exhaust by the process of displacement, and evaporate the filtered fluid.
Pharm. Hosp. Mil.

Mixture of Bistort.

℞ Powdered bistort, two drachms.
Syrup of quince, one ounce.

Rub together, and add

Tincture of catechu, two fl. drachms.
Water, four fl. ounces.

A spoonful every hour, shaking the bottle each time, in passive hemorrhages, and atonic mucous discharges. *Foy.*

BOLETUS LARICIS.

White Agaric.

A parasitic fungus growing on the trunk of the larch, in many parts of Europe. It is destitute of smell, but the taste, at first vapid and farinaceous, becomes bitter, acrid, and nauseous. Formerly much used as a purgative, in doses of half a drachm to a drachm. It has lately been thought to be very efficacious in arresting the colliquative sweats in phthisis.

Powder of Agaric.

℞ Powdered agaric, twelve grains.
White sugar, two drachms.

Mix well, and divide into six powders. One to be given at night, against colliquative sweats. *Radius.*

Powder of Agaric and Opium.

℞ Powdered agaric, eighteen grains.
" opium, three grains.
" gum Arabic, two drachms.

Mix, and divide into nine powders. One to be given at night, against colliquative sweats. *Radius.*

Pills of Agaric and Opium.

℞ Powdered agaric, fifteen grains.
Extract of opium, two grains and a half.

Mix, and form six pills. One or two at bedtime, in same cases as above noticed.
Rayer.

BRAYERA ANTHELMINTICA.

Cusso. Kousso.

Kousso is the flowering tops, intermixed with some unripe fruit, of the *Brayera Anthelmintica*, an Abyssinian tree about twenty feet high.

Sex. Syst. Icosand. digyn. *Nat. Syst.* Rosaceæ.

Griffith, Med. Bot. 272.

The flowers are small, pale-greenish, or brownish-red, on hairy pedicels; taste feebly acrid, and unpleasant; the odor evolved by boiling is very fragrant. They are exclusively used for expelling the tapeworm. Dose, two to four drachms in the form of powder or infusion.

Infusion of Kousso.

℞ Flowers of kousso, half an ounce.
Boiling water, eight fl. ounces.

Macerate for fifteen minutes, without straining. *Brit. Ph.*

A little lemon-juice to be swallowed, and the infusion being stirred up, the whole is taken, liquid and powder, at two or three draughts, at short intervals, being washed down with cold water and lemon-juice. To promote the operation, tea may be taken. In three or four hours, if the remedy has not operated, a dose of castor oil, or a saline purgative, should be administered.

Jon. Pereira.

BROMINIUM.

Bromine.

This elementary substance has much analogy to iodine in its chemical characters, and resembles it somewhat in its action on the system. It is a dark red, volatile liquid, having a very caustic taste and a disagreeable odor, and being sparingly soluble in water. It has been employed in bronchocele, scrofula, chronic cutaneous diseases, and hypertrophy of the heart.

Solution of Bromine.

℞ Bromine, one part.
Distilled water, forty parts.

Mix. Dose, six drops several times a day, gradually increasing the dose. *Pourché.*

Alcoholic Solution of Bromine.

℞ Bromine, ten drops.
Alcohol, one ounce.

Mix. As an external application. The strength to be increased five drops to the ounce, daily. *Fournet.*

Lotion of Bromine.

℞ Bromine, twenty to thirty drops.
Water, one pint.

Mix. For scrofulous ulcers. *Glover.*

℞ Bromine, eight drachms.
Bromide of potassium, three drachms.
Water, sufficient to make four fl. ounces.

Dissolve. As a local application in hospital gangrene, erysipelas, and sloughing sores. *Goldsmith.*

Bromine Ointment.

℞ Bromine, ten grains.
Bromide of potassium, twenty grains.
Lard, one ounce.

Mix. *Magendie.*

BRUCIA.

Brucine.

℞ Powdered false Angustura bark, at will.

Treat it three times with water, acidulated with muriatic acid, mix the liquids, evaporate, add milk of lime, wash the precipitate, dry, and treat it with alcohol; evaporate this, and combine the residue with sulphuric acid, dissolve the salt in water, treat with animal charcoal, crystallize, redissolve in water, and precipitate by means of ammonia. *Cottereau.*

A highly poisonous alkaloid, obtained from the bark of the *strychnos nux vomica*, or false Angustura bark. It is white, very bitter, and readily soluble in alcohol, but with difficulty in water. Acts on the system like strychnia, but with less energy, and has been given in same class of diseases. Dose, one-quarter to half a grain.

Pills of Brucia.

℞ Brucia, twelve grains.
Conserve of roses, half a drachm.

Mix, and divide into twenty-four pills. One to be given morning and evening, gradually increasing the dose. *Foy.*

Solution of Brucia.

℞ Brucia, six grains.
Distilled water, four fl. ounces.
Sugar, two drachms.

Mix. A tablespoonful, morning and evening. *Magendie.*

Tincture of Brucia.

℞ Brucia, eighteen grains.
Alcohol (0.847), one fl. ounce.

Dissolve. Six to twenty-four drops in some demulcent drink. *Soubeiran.*

BRUCIÆ ACETAS, MURIAS, ET SULPHAS.

Acetate, Muriate, and Sulphate of Brucia.

These are all made by the same process, using for each the appropriate acids.

℞ Brucia, at will.
Acetic acid, sufficient.

Put the brucia in a porcelain capsule on a water-bath; pour a small quantity of water on it, and then add the acid very gradually, constantly stirring till perfect saturation takes place; filter, evaporate to one-half, and then crystallize. *Cottereau.*

Used for the same purposes as the pure alkaloid, and in like doses.

BRYONIA.

Bryony.

The roots of two species of bryony are used in medicine, the *B. alba*, and *B. dioica*, the first in England, the latter in other parts of Europe; but are identical in their sensible properties and action on the system.

Sex. Syst. Monœc. syngen. *Nat. Syst.* Cucurbitaceæ.

Linn. Sp. Pl. 621. Griffith, Med. Bot. 311.

The part used is the root; this is acrid and purgative, causing copious, watery stools, in doses of ten grains to two scruples. It has also some reputation as a cataplasm.

Cataplasm of Bryony.

℞ Juice of bryony root,
Crumb of bread, each, sufficient

to form a cataplasm. Used as an application to engorged glands of the neck.
Barthez.

Compound Cataplasm of Bryony.

℞ Rasped bryony root, three ounces.
Elder flowers, one ounce.
Ammoniac, half an ounce.
Chloride of ammonium, two drms.
Conium leaves, two ounces.
Vinegar, sufficient.

Mix, and heat. An application to scrofulous tumors. *Plenck.*

Wine of Bryony.

℞ Bryony root, one ounce.
White wine, one pint.

Boil gently, and filter. To be taken in wineglassfuls, in dropsies. *Hufeland.*

BUCHU.

Buchu.

Buchu consists of the leaves of several species of *Diosma*, or more properly *Barosma*, especially of *B. betulina, crenata, crenulata, and serratifolia*. They are small shrubs, natives of the Cape of Good Hope.

Sex. Syst. Pentand. monog. *Nat. Syst.* Rutaceæ.

Linn. Sp. Pl. (Diosma) 287. Griffith, Med. Bot. 191.

These leaves have a strong, somewhat aromatic odor, and a bitterish, aromatic taste. They are gently stimulant and diuretic, and are much used in diseases of the urinary organs, and also in some other complaints. The dose, in substance, is from twenty to thirty grains.

Infusion of Buchu.

℞ Buchu leaves, one troyounce.
Boiling water, one pint.

Macerate for two hours, in a covered vessel, and strain. *U. S. Ph.*

The infusion of *Brit. Ph.* is made from one ounce of leaves with twenty ounces of boiling water.

The dose is from one to two fluidounces.

Compound Infusion of Buchu.

℞ Buchu leaves,
Uva ursi, each, half an ounce.
Boiling water, eight fl. ounces.

Digest for half an hour, strain, and add

Syrup of seneka, half a fl. ounce.

One or two spoonfuls every two hours, in atony of the bladder, and mucous discharges.
Radius.

Tincture of Buchu.

℞ Buchu leaves, five ounces.
Proof spirit, two pints (imp.).

Macerate and displace. *Brit. Ph.*

Dose, from one to four fl. drachms.

Extract of Buchu.

℞ Buchu, in coarse powder, one pound.
Ether, four fl. ounces.
Alcohol, twelve fl. ounces.

Displace without maceration, add diluted alcohol until a pint of ethero-alcoholic tincture is obtained; suffer this to evaporate spotaneously; treat the residue in the displacer, with diluted alcohol, till two pints are obtained; evaporate to a syrup; add the product of the first tincture, and with a gentle heat concentrate to the proper consistence. *W. Procter.*

Fluid Extract of Buchu.

℞ Buchu, in powder,
No. 50, sixteen troyounces.
Alcohol, sixteen fl. ounces.

Moisten the powder with six fl. ounces of the alcohol, pack firmly in a percolator, add the remaining ten fl. ounces, and macerate for four days; then, with alcohol, displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remaining tincture to two fl. ounces, and mix with the reserved portion. *U. S. Ph.*

Dose, twenty to thirty minims.

BUXUS.

Box.

The box is a shrub or small tree, native of the south of Europe, but now generally cultivated in this country.

Sex. Syst. Monœc. triand. *Nat. Syst.* Euphorbiaceæ.

The parts used are the wood and leaves. The first is sudorific and possesses somewhat the properties of guaiacum; the latter are purgative, but neither are now used. The following preparation, however, has obtained some celebrity in the cure of gonorrhœa and in epilepsy.

Oil of Box.

℞. Rasped box-wood, sufficient.

Distil, separate the oil, and rectify it.

Dose, four to five drops, three times a day. *Wirtemberg Ph.*

C.

CACAO.

Cacao. Chocolate Nuts.

These are the seeds of *Theobroma Cacao*, a small tree, indigenous to South America. They are also produced from some other sources.

Sex. Syst. Polyadelph. pentand. *Nat. Syst.* Byttneriaceæ.

Linn. Sp. Pl. 1100. Lindley, Flor. Med. 138.

The nuts are of an almond shape, and consist of a brownish, sweetish, somewhat oleaginous substance, covered by a leathery-like shell. They are principally used as an article of food, but are also employed in medicine.

Compound Cacao Powders. Palamoud.

℞. Roasted cacao, half a pound.
Rice flour,
Potato starch, each, two pounds.
Red saunders, powdered, one ounce.

Mix. A drachm to an ounce, boiled in water, as a restorative diet. *Soubeiran.*

Racahout des Arabes.

℞. Roasted cacao, two ounces.
Potato starch, five ounces.
Powdered salep, one ounce.
Sugar, eight ounces.
Vanilla, sufficient.

Mix. Two or three spoonfuls boiled with eight fl. ounces of water, form a nutritious diet for the convalescent. *Foy.*

Wakaka des Indes.

℞. Roasted cacao, two ounces.
Sugar, five ounces and a half.
Powdered cinnamon, two drachms.
" vanilla, thirty-six grs.
Ambergris, three grains.
Musk, one grain and a half.

Mix. Half a drachm, boiled with milk or water. More stimulating than the last. *Guibourt.*

Simple Chocolate.

℞. Caracas cacao,
Para cacao,
each, three hundred parts.
Powdered sugar, five hundred parts.
" cinnamon, three parts.

Remove the shells and clean the cacao carefully; pound the seeds in a hot mortar until reduced to a paste, and gradually mix the sugar and cinnamon with it. Pour the mass upon a hot slab, and work it with a roller or mallet into a uniform paste, which is transferred into moulds and cooled. *Paris Codex.*

Compound Cacao Paste Chocolate. Vanilla Chocolate.

℞. Cacao paste, six pounds.
Sugar, ten pounds.
Vanilla, eleven drachms.

Triturate thoroughly together, and form cakes. *Cottereau.*

Aromatic Chocolate.

℞. Cacao,
Sugar, each, sixteen ounces.
Powdered cinnamon, half an ounce.
Cloves, two drachms.
Cardamom,
Vanilla, each, one drachm.

Triturate together, and form cakes. *Weiglebt.*

Salep Chocolate.

℞. Simple chocolate, one hundred parts.
Powdered salep, three parts.
Triturate together, with the aid of heat, and form into cakes. *Paris Codex.*

White Chocolate.

℞. Sugar, six pounds.
Rice flour, one pound, twelve ounces.
Potato starch, eight ounces.
Gum Arabic, four ounces.
Tincture of vanilla, half fl. ounce.
Butter of cacao, eight ounces.
Boiling water, sufficient.
Triturate well, into a stiff paste. *Cottereau.*

These afford a good article of diet, for convalescents and debilitated persons, when boiled with water or milk. The last is the least stimulating.

Chocolate Cream.

℞. Boiling milk, sixteen parts.
Sugar,
Yolk of egg, each, two parts.
Ground cacao, one part.
Mix, and boil gently. *Béral.*

Butter or Oil of Cacao.

℞. Cacao, roasted, at will.
Reduce to a paste in a warm iron mortar, triturate on a stone slab, add a fifth part boiling water, place in a bag, and express between two heated metal plates; melt the product, and, on cooling, separate the water. Used for making suppositories. *Guibourt.*

Butter of Cacao Mixture.

℞. Butter of cacao, three ounces.
Oil of almonds, one ounce and six drachms.
Syrup of red poppies, one ounce.
Orange-flower water, four drachms.
Mix. As a soothing demulcent in catarrh. In spoonful doses. *Cadet.*

Butter of Cacao Ointment.

℞. Butter of cacao,
Oil of almonds, equal parts.
Melt over a water-bath. *Guibourt.*

CADMIUM.

Cadmium.

A soft, crystallizable, ductile, volatilizable metal, not used in medicine in its metallic state, but affording the following remedial salts.

In its general effects, cadmium resembles the corresponding zinc salts, but is regarded to be about ten times more powerful.

CADMII IODIDUM.

Iodide of Cadmium.

It is formed by the direct combination of iodine with the metal in the presence of water, and forms crystalline scales, having a pearly white lustre. It is used externally in place of iodide of lead, the yellow color of which is sometimes objectionable.

Ointment of Iodide of Cadmium.

℞. Iodide of cadmium, sixty-two grains.
Simple ointment, one ounce.
Mix thoroughly. *Brit. Ph.*

CADMII SULPHAS.

Sulphate of Cadmium.

℞. Cadmium, eight drachms.
Nitric acid,
Distilled water, each, sixteen drachms.
Dissolve with the aid of heat, filter, and precipitate with an aqueous solution of
Carbonate of sodium, twenty-four drachms.
Wash the precipitate, and dissolve in
Sulphuric acid, seven drachms.
Water, thirty drachms.
Evaporate to one-third and crystallize. *U. S. Ph.*

Used in solution and ointment, as an application in chronic ophthalmia.

Solution of Sulphate of Cadmium.

℞. Sulphate of cadmium, two grains.
Laudanum, twenty drops.
Rose water, four fl. ounces.
Mix. As a wash in chronic ophthalmia. *Guibourt.*

℞. Sulphate of cadmium, eight grains.
Water, one fl. ounce.
Dissolve. Used as a wash in otorrhœa. *Lincke.*

Ointment of Sulphate of Cadium.

R. Sulphate of cadmium, one or two grains.
Lard, one drachm.

Mix. As an application in spots on the cornea. *Radius.*

CAHINCA.

Cahinca.

This is the root of *Chiococca anguifuga*, a shrub growing in Brazil. Its effects are those of a diuretic, and it has chiefly been employed in dropsical diseases. Dose, twenty to forty grains.

Extract of Cahinca.

R. Powdered cahinca, one part.
Diluted alcohol, seven parts.

Macerate twelve hours, then introduce into a displacer, exhaust, and evaporate to consistence of an extract.

Dose, ten to twenty grains.

Decoction of Cahinca.

R. Bruised cahinca, two drachms.
Water, one pint and a half.

Boil to one-half, and strain.

Dose, a tablespoonful. *Von Langsdorff.*

CALAMINA.

Calamine.

This is a native impure carbonate of zinc, found in large quantities in England and Germany. The pure carbonate will be described under the head of *Zinc;* it is now almost exclusively employed in place of calamine.

Prepared Calamine.

R. Calamine, at will.

Heat to redness and pulverize; then reduce to a very fine powder, as directed for prepared chalk. *U. S. Ph.* 1850.

Used externally, as a mild astringent and absorbent, to excoriations and ulcerations, and also as an ingredient of cerates, etc.

Calamine Cerate.
(Turner's Cerate.)

R. Prepared calamine,
Yellow wax, each, three ounces.
Lard, one pound.

Melt the wax and lard, and as they thicken, stir in the calamine.

This cerate is much used for excoriations, ulcerations, etc.

CALAMUS.

Calamus.

This is the rhizome of *Acorus Calamus*, an indigenous plant found in most parts of the United States, in wet situations. It also grows in Europe and Asia.

Sex. Syst. Hexand. monog. *Nat. Syst.* Orontiaceæ.

Linn. Sp. Pl. 462. Griffith, Med. Bot. 620.

The part employed is the root; this has a fragrant odor, and a warm, bitterish, aromatic taste. It is a stimulant tonic, and aromatic. The dose, in substance, is from a scruple to a drachm.

Electuary of Calamus.

R. Powdered calamus, two drachms and a half.
Powdered valerian, one drachm and a half.
Syrup of orange peel, two ounces.

Mix. A teaspoonful every two hours. *Shubarth.*

Infusion of Calamus.

R. Calamus, one ounce.
Boiling water, one pint.

Infuse for a quarter of an hour, and strain.

Dose, a wineglassful or more.

Compound Infusion of Calamus.

R. Calamus, ten drachms.
Boiling water, one pint.

Infuse and strain, then add

Peppermint water, two fl. ounces.
Muriatic ether, one drachm and a half.
Syrup, one ounce.

Mix. Dose, a tablespoonful, in disordered digestion. *Augustin.*

Tincture of Calamus.

R. Calamus, bruised, one part.
Alcohol (0.892) five parts.

Macerate for eight days, and filter. *Ph. Germ.*

Compound Tincture of Calamus.

℞ Contused calamus, ginger, coriander, Black pepper, each, one ounce.
Alcohol, two pints and a half.

Macerate for four days, and filter. Dose, forty to fifty drops as a stomachic and carminative. *Niemann.*

℞ Contused calamus, gentian, each, three ounces.
geum, two ounces and a half.
angelica, one ounce and a half.
ginger, half an ounce.
fennel, two ounces.
Alcohol, twelve pints.

Macerate for six days, and filter. A teaspoonful in wine. *Tromsdorff.*

Fluid Extract of Calamus.

℞ Powdered calamus, sixteen troyounces.
Stronger alcohol, sufficient.

Pack the powder, moistened with four fl. ounces of the alcohol, in a percolator, add twelve fl. ounces of alcohol, and macerate for four days; then displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces and mix with reserved portion.

Extract of Calamus.

Exhaust calamus with diluted alcohol and evaporate to the proper consistence. *Ph. Germ.*

Dose, five to ten grains.

CALCIUM.

CALCIUM.

CALCII BROMIDUM.

BROMIDE OF CALCIUM.

It is prepared by neutralizing hydrobromic acid with pure carbonate of calcium, filtering, and evaporating. Recommended in insomnia, delirium tremens, and other nervous disorders. Dose, ten to thirty grains, in solution.

Mixture of Bromide and Lactophosphate of Calcium.

℞ Bromide of calcium, one troyounce.
Syrup of lactophosphate of calcium, four fl. ounces.

Dissolve. Dose, a teaspoonful three times a day, in a little water. *W. A. Hammond.*

CALCII CARBONAS.

CARBONATE OF CALCIUM.

Precipitated Carbonate of Calcium.

℞ Solution of chloride of calcium, five pints and a half.
Carbonate of sodium, seventy-two troyounces

dissolved in six pints of distilled water. Mix while hot. Wash the precipitate three times, and dry. *U. S. Ph.*

Prepared Chalk.

℞ Chalk, at will.

Add a little water, and rub to fine powder. Throw into a vessel of water, and stir; pour off liquid while yet turbid, into another vessel, and permit chalk to subside; pour off water, and dry the precipitate. *U. S. Ph.*

Prepared Oyster Shell.

℞ Oyster shell, at will.

Free it from extraneous matter, wash with boiling water, reduce to powder, and proceed as with chalk. *U. S. Ph.*

As an antacid in bowel affections. In doses of from ten to forty or more grains, often repeated.

Aromatic Powder of Chalk.

℞ Prepared chalk, eleven ounces.
Powdered sugar, twenty-five ounces.
cardamom, one ounce.
cloves, one ounce and a half.
nutmeg,
saffron, each, three ounces.
cinnamon, four ounces,

Mix well and pass through a fine sieve. *Brit. Ph.*

Stimulant, astringent, and antacid; useful in diarrhœa, with acidity, but without inflammation. Dose, ten to sixty grains.

Compound Powder of Chalk with Opium.

℞ Aromatic powder of chalk, nine ounces and three-quarters.
Powdered opium, a quarter ounce.

Mix well. *Brit. Ph.*

In diarrhœa of adults, in doses of ten to forty grains, after each evacuation.

Dentifrice Powder with Carbonate of Calcium.

℞ Powdered cuttlefish bone, " Peruvian bark, " myrrh, } equal parts.

Mix. *Pierquin.*

℞ Prepared chalk, Carbonate of magnesium, Powdered cinchona, } each, 100 parts.
Essence of mint, one part.

Mix. *Paris Codex.*

Lozenges of Chalk.

℞ Prepared chalk, four troyounces.
Gum Arabic, powdered, one troyounce.
Nutmeg, powdered, one drachm.
Sugar, " six troyounces.

Rub together till mixed; mix with sufficient water to form mass; divide into four hundred and eighty lozenges. *U. S. Ph.*

As a mild antacid astringent, in diarrhœa.

Dentifrice Electuary.

℞ Powdered red coral, four ounces.
" cuttlefish bone, one ounce.
" cinnamon, one ounce.
" cochineal, half an ounce.
" alum, half a drachm.
Oil of cloves, six drops.
Honey, ten ounces.

Mix. *Taddei.*

Chalk Mixture.

℞ Prepared chalk, half an ounce.
Glycerin, half a fl. ounce.
Powdered gum Arabic, two drachms.
Cinnamon water,
Water, each, four fl. ounces.

Rub them together until thoroughly mixed. *U. S. Ph.*

A tablespoonful, as may be required.

℞ Prepared chalk, one drachm and a half.
White sugar,
Gum Arabic, each, one drachm.
Oil of cinnamon, two drops.
Tincture of opium, forty to fifty drops.
Distilled water, four fl. ounces.

Mix. A tablespoonful, every two hours, in diarrhœa and dysentery. *Ellis.*

Compound Chalk Mixture.

℞ Chalk mixture, five fl. ounces.
Aromatic confection, one drachm.
Solution carbonate ammonium, one fl. drachm.
Laudanum, twenty minims.

Mix. A tablespoonful, occasionally, in diarrhœa. *Ainslie.*

CALCII CHLORIDUM.

Chloride of Calcium.

℞ Chalk, five ounces.
Muriatic acid,
Water, each, ten fl. ounces.

Mix the acid and water, and gradually add the chalk. When all action ceases, filter, and evaporate to dryness. Fuse, and pour out on a stone slab; when cool, break in fragments, and preserve in well-stopped bottles. *Lond. Ph.* 1836.

Cataplasm of Chloride of Calcium.

℞ Chloride of calcium,
" soda,
each, half an ounce.
Water, half a pint.
Linseed meal, sufficient.

Make a cataplasm. In scrofulous and white swellings. *Swediaur.*

Solution of Chloride of Calcium.

℞ Marble, in small pieces, six troyounces.
Muriatic acid, twelve troyounces.
Distilled water, half a pint.

Mix the liquids, add the marble gradually, apply a gentle heat, decant, and evaporate to dryness. Dissolve the residue in one and a half times its weight of distilled water, and filter. *U. S. Ph.*

Dose, thirty drops two or three times a day, gradually increased; to be given in milk, or some demulcent. Used in scrofula, goitre, tabes mesenterica, etc.

Mixture of Chloride of Calcium.

℞. Chloride of calcium, one drachm.
Extract of henbane, ten grains.
Syrup of liquorice, one ounce.
Water, six ounces.

Mix. A spoonful four times a day in scrofula. *Phœbus.*

℞. Chloride of calcium, one drachm.
Almond mixture, seven fl. ounces.
Syrup of gum Arabic, one fl. ounce.

Mix. A teaspoonful every three hours. *Gräfe.*

Pills of Chloride of Calcium.

℞. Chloride of calcium, one drachm.
Extract of opium, nine grains.
Mucilage of gum Arabic, sufficient.

Mix, and make fifty-four pills. One every two or three hours, in gonorrhœa, gradually increasing the dose, until eight, ten, or twelve are taken every hour. *Gräfe.*

CALCII HYPOPHOSPHIS.

Hypophosphite of Calcium.

It is prepared by boiling one part of phosphorus and four parts of burned lime in about fifty parts of water until combination has been effected, then filtering from the excess of lime, evaporating and purifying by recrystallization.

The hypophosphites of potassium, sodium, and ammonium are obtained by decomposing the solution of the former with a solution of the alkaline carbonate.

Hypophosphite of iron is obtained from any of the alkaline hypophosphites by precipitating with solution of tersulphate of iron.

Hypophosphorous acid is made by accurately precipitating hypophosphite of calcium with oxalic acid.

These preparations are used as nervine tonics in phthisis, nervous debility, etc., in doses of two to fifteen grains.

Syrup of Hypophosphites.

℞. Hypophosphite of calcium, two hundred and fifty-six grs.
Hypophosphite of sodium, one hundred and ninety-two grs.
Hypophosphite of potassium, one hundred and twenty-eight grains.
Hypophosphite of iron, ninety-six grains.
Hypophosphorous acid, sufficient.
Sugar, twelve troyounces.
Fluid extract of vanilla, half an ounce.
Water, sufficient.

Dissolve the iron salt in hypophosphorous acid, the other salts in six fl. ounces of water, mix and add water to make nine fl. ounces; in this dissolve the sugar and add the vanilla. Each fl. drachm contains about five grains of the hypophosphites. *Procter.*

Solution of Hypophosphites.

℞. Hypophosphite of calcium,
Hypophosphite of potassium, each, four grains.
Hypophosphite of sodium, six grains.
Glycerin, two fl. drachms.
Water, one fl. ounce.

Dissolve. Dose, forty drops thrice daily in water, in remittent fevers of childhood. *Purdon.*

CALCII IODIDUM.

Iodide of Calcium.

℞. Iodide of iron, at will.

Precipitate with an excess of slaked lime, evaporate to dryness, dissolve in distilled water, filter, evaporate, and crystallize. *Magendie.*

Pills of Iodide of Calcium.

℞. Iodide of calcium, ten grains.
Extract of savine, twelve grains.

Mix, and divide into four pills. One every four hours. In amenorrhœa, with scrofula. *Brera.*

℞. Iodide of calcium, ten grains.
Extract of aconite, six grains.

Mix, and divide into six pills. One every four hours. In chronic bronchitis and tubercular phthisis. *Brera.*

CALCII OXIDUM.

Calx. Lime.

℞. Chalk, one pound.

Break into small pieces, and calcine in a strong fire for an hour. *Lond. Ph.* 1836.

Lime Water.

℞. Lime, four troyounces.
Distilled water, one gallon.

Slake the lime with a little of the water, add the remainder, stir well, and let stand for three hours. Keep in well-stopped bottles. *U. S. Ph.*

Compound Lime Water.

℞. Rasped guaiacum wood, half a pound.
Contused liquorice root, one ounce.
Contused sassafras bark, half an ounce.
Contused coriander seeds, three drachms.
Lime water (wine meas.), six pints.

Macerate for two days in a closed vessel, and filter. *Dub. Ph.* 1826.

Saccharated Solution of Lime.

℞. Slaked lime, one ounce.
Refined sugar, two ounces.
Distilled water, twenty ounces.

Triturate lime and sugar together, transfer to a bottle containing the water, shake occasionally for a few hours, then separate the clear solution with a siphon. Its sp. gr. is 1.052. Dose, fifteen to sixty minims. *Brit. Ph.*

Lime Water and Carbonate of Potassium.

℞. Carbonate of potassium, two drachms.
Lime water, two pints.

Dissolve. As an antilithic a wineglassful every two hours, in same quantity of new milk. *Ellis.*

Lime Water and Milk.

℞. Lime water,
New milk, equal parts.

Mix. As an antacid, and to remove sickness of the stomach. Dose, one to two tablespoonfuls. *Ellis.*

Antacid Mixture.

℞. Lime water, four fl. ounces.
Solution of potassa,
Syrup of orange-peel,
each, one fl. ounce.

Mix. Dose, a spoonful in a cup of water. Found useful in dyspepsia and heartburn. *Cooley.*

Liniment of Lime.

℞. Linseed oil, three fl. ounces.
Lime water, six fl. ounces.

Make a liniment. As an application to burns and scalds. *Ellis.*

℞. Lime water,
Linseed oil, equal measures.

Mix. Used like the preceding, under the name of *Carron oil.*
U. S. Ph. and *Brit. Ph.*

Liniment of Lime Water and Alcohol.

℞. Alcohol, two fl. ounces.
Lime water, half a pint.

Mix. In same cases as the last. *Ellis.*

Liniment of Lime Water and Opium.

℞. Lime water, Linseed oil, Laudanum, } equal parts.

Mix. In the same cases, and as an embrocation to allay pain. *Augustin.*

Liniment for Sore Breasts.

℞. Lime water,
Almond oil, each, three drachms.
Extract of opium, one grain.

Mix. The breasts are to be covered with lint dipped in this mixture. *Niemann.*

Liniment of Lime and Sulphur.

℞. Lime,
Sulphur, each, two ounces.
Olive oil, sufficient.

Mix. As a friction in scabies. *Giannini.*

Lime Ointment.

℞. Lime, one ounce.
Linseed oil, three ounces.
Mucilage of quince seeds, two ounces.

Mix well. In burns and scalds. *Radius.*

℞. Slaked lime, one drachm.
Carbonate of sodium, two drachms.
Extract of opium, ten grains.
Lard, two ounces.

Rub well together. In obstinate cutaneous affections. *Biett.*

℞. Slaked lime,
Laudanum, each, half a drachm.
Cucumber ointment, four drachms.

Rub well together. As an application to hemorrhoidal tumors. *Guibourt.*

℞ Lime,
Sulphur, each, two ounces.
Chloride of sodium, one ounce.
Lard, one pound.
Olive oil, two pounds.

Mix well. As a friction in itch.
Ferrara Ph.

CALCII PHOSPHAS.

Phosphate of Calcium.

℞ Bone, calcined to whiteness, in powder, four troyounces.
Muriatic acid, eight troyounces.
Water, sufficient.

Dissolve the bone in the acid and a pint of water, dilute with another pint of water, precipitate with excess of ammonia, add to the magma twice its bulk of boiling water, collect upon a strainer, wash well, and dry at a gentle heat. *U. S. Ph.*

Dose, ten to thirty grains.

℞ Marble, twenty parts.
Muriatic acid,
Distilled water, each, fifty parts.

Digest for several hours, decant and add

Chlorinated lime, one part

previously diffused in water. Digest for several hours, add water of ammonia until in slight excess, filter and precipitate by a solution of

Phosphate of sodium, fifty parts,

In

Distilled water, three hundred parts.

Collect, wash, and dry the precipitate.
Ph. Germ.

Burnt Hartshorn.

℞ Burn pieces of hartshorn in an open vessel till quite white, and prepare them as directed for chalk.
Lond. Ph. 1836.

Has been thought efficacious in mollities ossium and rachitis, but probably inert. Dose, twenty grains, or more.

Syrup of Phosphate of Calcium.

℞ Phosphate of calcium, one hundred and twenty-eight grains.
Glacial phosphoric acid, half an ounce.
Sugar, seven and a half ounces.
Water, four fl. ounces.
Essence of lemon, twelve drops.

Mix the phosphate with the water, and heat in a sand-bath, gradually adding the phosphoric acid. Add water enough to compensate for the evaporation, then dissolve the sugar, and when cold add the essence of lemon. Each teaspoonful contains two grains of phosphate and four grains of phosphoric acid. *A. B. Durand.*

Syrup of Lactophosphate of Calcium.

℞ Chloride of calcium, one troyounce.
Phosphate of sodium, four troyounces.
Concentrated lactic acid, one troyounce.

Dissolve the salts separately in water, mix the solutions, wash the precipitate well, dissolve in the acid, and mix with sufficient syrup to make two pints and a half.
E. Chiles.

Dentifrice Powder of Phosphate of Calcium.

℞ Phosphate of calcium, eighteen parts.
White bole,
Gum lac, each twelve parts.
Cinnamon, one part.
Myrrh, two parts.

Powder well, and mix. *Van Mons.*

Dentifrice Electuary of Phosphate of Calcium.

℞ Powdered phosphate of calcium, two ounces and a half.
" gum lac, one ounce.
" cinnamon, one drachm and a half.
" cloves, one scruple.
Syrup of lemon, sufficient.

Make a soft electuary. *Van Mons.*

CALCII SULPHURETUM.

Sulphuret of Calcium.

℞ Quicklime, seven parts.
Sulphur, four parts.

Pulverize, and heat for two hours in a covered crucible. *Guibourt.*

℞ Quicklime, three parts.
Sulphur, one part.
Water, five parts.

Mix, and boil gently; evaporate to dryness, stirring. Keep in tight bottles. *Codex.*

Stimulant and diaphoretic. Dose, five to ten grains.

Compound Pills of Sulphuret of Calcium.

℞. Sulphuret of calcium, one drachm.
Powdered cinnamon,
Extract of aconite, each, fifteen grains.
" mallows, sufficient.

Mix, and make sixty pills. Dose, four, three or four times a day, in gout and chronic rheumatism. *Phœbus.*

Liniment of Sulphuret of Calcium.

℞. Sulphuret of calcium, one ounce.
Oil of juniper, two drachms.
Dippel's animal oil, ten drops.

Mix well. As an embrocation in gout. *Augustin.*

CALX CHLORINATA.

Chlorinated Lime.

It is obtained by passing chlorine gas over slaked lime, until it is saturated. It is desiccant and disinfectant, and is also used to ill-conditioned ulcers, burns, chilblains, to some cutaneous affections, etc.

Preservative Liquid.

℞. Water, sixteen parts.
Chlorinated lime, four parts.
Alum, two parts.
Nitre, one part.

Mix. Said to be very efficient for the preservation of anatomical preparations. *Reboulet.*

Lozenges of Chlorinated Lime.

℞. Chlorinated lime, two drachms.
Sugar, eight ounces.
Starch, one ounce.
Tragacanth, one drachm.
Cochineal, three grains.

Rub well together, and make lozenges of three grains each. One to be taken three or four times a day, in cases of bad breath. *Deschamps.*

Solution of Chlorinated Lime.

℞. Chlorinated lime, one pound.
Distilled water, ten pounds.

Triturate together and afterwards shake frequently for three hours; strain through muslin. *Brit. Ph.*

Cullutory of Chlorinated Lime.

℞. Chlorinated lime, fifteen to thirty grains.
Mucilage of gum Arabic, one fl. ounce.
Syrup of orange peel, half fl. ounce.

Mix. To be applied by means of a piece of sponge or camel's-hair brush, to ulcers in the mouth. *Angelot.*

℞. Chlorinated lime, three drachms.
Distilled water,
Alcohol, each, two fl. ounces.
Oil of roses, four drops.

Dissolve, and filter. A teaspoonful in a glass of water, to correct fetid breath. *Chevallier.*

Chlorinated Lime Dentifrice.

℞. Chloride of lime, four grains.
Powdered red coral, two drachms.

A toothbrush, slightly wetted, to be dipped in this powder, and rubbed on the teeth. *Magendie.*

Compound Injection of Chlorinated Lime.

℞. Chloride of lime, two drachms.
Decoction of rhatany, thirteen fl. ounces.

Dissolve, and filter. As an injection in ozena, three or four times a day. *Detmold.*

Ointment of Chlorinated Lime.

℞. Chlorinated lime, one drachm.
Lard, one ounce.

Rub together. In scrofulous swellings. *Cima.*

℞. Chlorinated lime, half a drachm.
Lard, one ounce.

Rub together. In goitre. *Werneck.*

℞. Chlorinated lime,
Borate of sodium, each, one drachm.
Lard, one ounce.

Rub together thoroughly. In chilblains. *Trusen.*

℞. Chlorinated lime, one drachm.
Powdered digitalis, two drachms.
Vinegar, two scruples.
Lard, one ounce.

Rub together. In indolent glandular tumors. *Phœbus.*

Liniment of Chlorinated Lime.

℞. Chlorinated lime, half a drachm.
Rub in a glass mortar, adding gradually,
Rose water, one fl. ounce.
and when quite clear,
Oil of almonds, one fl. ounce.
As an application in tinea capitis.
Trusen.

CALENDULA.

MARIGOLD.

This is the officinal name of *Calendula officinalis*, a plant indigenous to Europe, and often cultivated in gardens in this country as a pot herb.

Sex. Syst. Syngen. necess. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1304. Lindley, Flor. Med. 466.

The parts used are the herb, flowers, and fruit. Their smell is peculiar, and somewhat aromatic; the taste is feebly bitter, and a little acrid. It was formerly much used, but had fallen into disuse, when, of late years, it has again been brought forward as a remedy in cancerous affections.

Extract of Marigold.

℞. Marigold, one part.
Tepid water, four parts.
Macerate for twenty-four hours, boil for a quarter of an hour, express, boil residue with four parts of water, express, mix two decoctions, and evaporate to proper consistence. *Guibourt.*

Pills of the Extract of Marigold.

℞. Extract of marigold, " cicuta, Subcarbonate of iron, each, two drachms.
Powdered marigold, one drachm and a half.
Mix well, and divide into pills of two grains each. Five or six are to be taken three times a day in scirrhous and cancerous affections. *Rust.*

Lotion of Extract of Marigold.

℞. Extract of marigold, " cicuta, each, three drachms.
Cherry-laurel water, two ounces.
Tincture of opium, half an ounce.
Mix. As a lotion to cancerous ulcerations.
Rust.

Infusion of Marigold.

℞. Marigold flowers, three drachms.
Boiling water, sufficient
to obtain five ounces; infuse, and add to the strained liquid
Syrup of orange-peel, half an ounce.
Dose, two spoonfuls, three times a day.
Radius.

Liniment of Marigold.

℞. Marigold flowers, three drachms.
Water, five fl. ounces.
Boil to three ounces, strain, and add
Extract of marigold, one drachm.
Tar, two ounces.
Pyroligneous acid, half an ounce.
Gum Arabic, sufficient.
Mix. As an application to cancerous ulcers.
Radius.

CALOTROPIS.

MUDAR.

The *Calotropis gigantea* is a native of the East Indies, and is now naturalized in several of the West India Islands.

Sex. Syst. Pentand. monog. *Nat. Syst.* Asclepiadaceæ.

Brown, Tr. Wern. Soc. 1, 29. Griffith, Med. Bot. 456.

The part used is the bark of the root; this is of a whitish color, inodorous, but with a bitter, nauseous taste. It is purgative, alterative, and diaphoretic, and has been highly spoken of in the treatment of elephantiasis and lepra. Dose, three grains to thirty; in the latter dose it is emetic and purgative.

Infusion of Mudar.

℞. Mudar, three drachms.
Boiling water, eight ounces.
Infuse, and strain. As an alterative, one to two fl. drachms; as an emetic, two fl. ounces. *Cassanova.*

Pills of Mudar.

℞. Powdered mudar, one drachm.
Honey, sufficient.
Beat into mass, and divide into pills of four grains. Two or three to be taken daily as an alterative in lepra, etc.
Cassanova.

Oil of Mudar.

℞. Powdered mudar, one drachm.
Olive oil, seven ounces.

Infuse for half an hour over a water-bath, and strain. As an application to leprous sores. *Cassanova.*

CALUMBA.

Columbo.

Columbo is the root of *Jateorrhiza palmata* and *calumba* (*Cocculus palmatus*), a climbing plant, a native of Mozambique.

Sex. Syst. Diœc. hexand. *Nat. Syst.* Menispermaceæ.

Hooker, Bot. Mag. 2970-71. Griffith, Med. Bot. 103.

As found in the shops, the root is in round slices, externally of a brown, wrinkled appearance, internally yellow. It is somewhat aromatic, and has a very bitter taste. It is an excellent bitter tonic, with no astringency. It is useful in diseases where the pure bitters are required, and generally agrees with the stomach. Dose, in powder, is from ten to thirty grains.

Powder of Columbo and Iron.

℞ Powdered columbo, Subcarbonate of iron, Powdered rhubarb, " ginger, each, one drachm.

Mix, and make twelve powders; one to be taken every four hours. *A. T. Thomson.*

Powder of Columbo and Magnesia.

℞ Powdered columbo, ten grains.
Magnesia, two scruples.

Mix for a dose. In cardialgia. *Brugnatelli.*

Powder of Columbo and Tartrate of Iron.

℞ Tartrate of iron and potassium, two scruples.
Powdered columbo, half a drachm.

Mix, and divide into four powders. One every three or four hours, in syrup. *Ellis.*

Compound Pills of Columbo.

℞ Powdered columbo, four scruples.
Opium, four grains.
Oil of peppermint, ten drops.
Syrup of pinks, sufficient.

Beat into mass, and form thirty pills. Two, three times a day, in spasmodic vomiting. *St. Marie.*

℞ Powdered columbo, one drachm.
" rhubarb, two scruples.
Extract of chamomile, two drachms.
Oil of caraway, five drops.
Syrup of saffron, sufficient.

Form mass, and divide into pills of four grains. Four to be taken a day, in mania with amenorrhœa. *Augustin.*

Infusion of Columbo.

℞ Colombo in powder, No. 40, half a troyounce.
Water, sufficient.

Moisten powder with two fl. drachms of water, pack, and percolate one pint. Heat infusion to the boiling point and strain when cold. Or macerate columbo in a pint of boiling water for two hours, and strain. *U. S. Ph.*

℞ Columbo, cut small, half an ounce (avoir.).
Cold distilled water, ten fl. ounces.

Macerate for an hour, and strain. *Brit. Ph.*

Infusion of Columbo and Ginger.

℞ Bruised columbo one ounce.
" ginger, two drachms.
Boiling water, one pint.

Infuse, and strain. A wineglassful cold, every two hours, in chronic diarrhœa. *Ellis.*

Infusion of Columbo, Rhubarb, etc.

℞ Bruised caraway, columbo, rhubarb, each, ten grains.
Boiling water, sufficient for three and a half fl. ounces.

Digest for two hours, strain, and add

Tincture of rhubarb, one fl. drachm.
Syrup of ginger, two fl. drachms.

Mix. Dose, a teaspoonful to a tablespoonful, in diarrhœa. *Ellis.*

Mixture of Columbo.

℞ Columbo, half a drachm.

Boil in

Water, three to five fl. ounces.

Strain, and add

Carbonate of potassium, ten grains.
Lemon juice, three fl. drachms.
Tincture of opium, twelve drops.

Mix. A tea- to a tablespoonful, every hour, as an anti-emetic. *Ellis.*

Compound Decoction of Columbo.

℞ Columbo,
Quassia, each, two drachms.
Orange-peel, one drachm.
Rhubarb, one scruple.
Carbonate of potassium, half a drachm.
Water, twenty fl. ounces.

Boil down to a pint, strain, and add

Tincture of lavender, half fl. ounce.

Coxe.

Fluid Extract of Columbo.

℞ Columbo in powder,
No. 60, sixteen troyounces.
Glycerin, two fl. ounces.
Alcohol, fourteen fl. ounces.

Moisten powder with four fl. ounces of the mixed liquids, pack in a percolator, add the remaining mixture, and macerate for four days; then with a mixture of two parts of alcohol and one of water displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with reserved portion. Dose, ten to thirty minims. *U. S. Ph.*

Extract of Columbo.

℞ Columbo cut small, one pound (avoir.).

Distilled water, four pints (imper.).

Macerate with half the water for twelve hours, strain and press; macerate as before with other half, strain and press, filter the liquors, and evaporate by means of a water bath to proper consistence. Dose, two to ten grains. *Brit. Ph.*

℞ Bruised columbo, one part.
Alcohol, sp. gr. 0.914, eight parts.

Macerate with six parts of alcohol for ten days and express; macerate residue with *two parts* of alcohol for three days; distil strained liquors, and evaporate to proper consistence. *Paris Codex.* The extract of *Ph. Germ.* is made with diluted alcohol.

Tincture of Columbo.

℞ Columbo, bruised, four ounces.
Diluted alcohol, sufficient.

Obtain by percolation two pints of tincture. *U. S. Ph.*

The tincture of *Brit. Ph.* is about the same strength, made by maceration with proof spirit sp. gr. 0.920.

Dose, one to four fl. drachms.

℞ Columbo, bruised, one part.
Alcohol, sp. gr. 0.914, five parts.

Macerate for ten days, express, and filter. *Paris Codex.*

Dose, half to two fl. drachms.

Concentrated Tincture of Columbo.

℞ Columbo in powder,
No. 60, sixteen troyounces.
Alcohol, sufficient.

Obtain, by slow displacement, two pints.

Dose, half a teaspoonful. *Maryland Coll. Ph.*

Mixture of Columbo and Cascarilla.

℞ Powdered columbo, half an ounce.
Water, ten fl. ounces.

Boil to six ounces, add, towards close,

Cascarilla, two drachms.

Strain, and add

Tincture of orange-peel, two drachms.
Syrup of cinnamon, one ounce.

A spoonful every hour, in chronic diarrhœa. *Berends.*

Mixture of Columbo and Salep.

℞ Extract of columbo, one drachm.
Decoction of salep, three ounces.
Fennel sugar, two scruples.

Mix. Two spoonfuls a day, in the diarrhœa of children. *Wendt.*

CAMPHORA.

Camphor.

A peculiar white, crystallizable, semi-transparent, volatile product of several plants; but that used in medicine is obtained from the *Camphora officinarum*, an evergreen tree, of considerable size, indigenous to China and other Asiatic countries. The volatile oil is likewise employed.

Sex. Syst. Enneand. monog. *Nat. Syst.* Lauraceæ.

Nees. Laurin. 88. Griffith, Med. Bot. 553.

Camphor has narcotic, diaphoretic, sedative properties, and is employed in a variety of diseases, and used externally, as an anodyne. The dose is from three to ten grains. Camphor can be powdered by trituration with a few drops of alcohol.

Camphor Powder.

℞ Camphor nine grains.
Sugar, one drachm.

Mix, and divide into nine powders. *Augustin.*

Compound Camphor Powder.

℞. Powdered camphor,
Myrrh, each, two drachms.
Peruvian bark,
Chamomile, each, half an ounce.
Charcoal, one ounce.

Mix. Dose, two scruples, or more, in gangrene. *Rust.*

℞. Powdered camphor,
Benzoic acid, each, six grains.
Sugar, one drachm.

Mix, and divide into four powders. As an antispasmodic and sedative. *Saunders.*

℞. Powdered gum Arabic, one ounce.
" orange-peel,
" sugar, each, two drachms.
" camphor, ten grains.
" opium, five grains.

Mix. A teaspoonful every hour. *Ammon.* Said to have been useful in cholera.

Camphor Pills.

℞. Powdered camphor, Sugar, Starch, Crumb of bread, each, one scruple.

Mix, and make twenty pills. *Augustin.*

Compound Camphor Pills.

℞. Powdered camphor, twenty-four grains.
" musk, eight grains.
" opium, two grains.
Syrup, sufficient.

Beat into a mass, and divide into twelve pills. In hospital gangrene. *Dupuytren.*

Pills of Camphor and Lactucarium.

℞. Camphor,
Lactucarium, each, fifty grains.

Mix, and make twenty pills. Four to six daily, as an aphrodisiac. *Ricord.*

Pills of Camphor and Musk.

℞. Camphor, one scruple.
Musk, ten grains.
Ammoniac, two scruples.
Opium, four grains.

Mix, and divide into four grain pills. Dose, four or five in a day, in nervous disorders. *Richard.*

Camphor Water.

℞. Camphor, two drachms.
Alcohol, forty minims.
Carbonate of magnesium, four drachms.
Distilled water, two pints.

Rub the camphor with the alcohol, then with the magnesia, and afterwards with the water gradually added, and filter. *U. S. Ph.*

Brit. Ph. directs to secure half an ounce of camphor inclosed in a muslin bag, at the bottom of a bottle containing ten pounds of water, and to pour off the solution as required.

Dose, one or two tablespoonfuls, to be repeated as occasion may require.

Camphor Water and Laudanum.

℞. Camphor water, four fl. ounces.
Compound spirit of lavender, two fl. drachms.
Tincture of opium, forty to fifty drops.

Mix. A tablespoonful, every two hours, in diarrhœa and dysentery. *Ellis.*

Camphor Water and Nitric Acid. (Hope's Mixture.)

℞. Camphor water, four fl. ounces.
Nitric acid, four drops.
Tincture of opium, forty to fifty drops.

Mix. In the same dose, and in the same complaints, as the last. *Ellis.*

℞. Nitrous acid, one fl. drachm.
Laudanum, forty drops.
Camphor water, eight fl. ounces.

Mix. Dose, one or two fl. ounces every three hours, in dysentery. *Hope.*

Camphor Water and Hoffmann's Anodyne.

℞. Camphor water, ten fl. drachms.
Laudanum, forty drops.
Spirit of sulphuric ether, one fl. drachm.
Syrup of poppies, one fl. drachm.

Mix. To prevent a paroxysm of intermittent fever. To be given just before its accession. *Gregory.*

℞. Camphor water, four fl. ounces.
Hoffmann's anodyne, two fl. drachms.

Mix. A dessertspoonful, every hour or two, in some demulcent drink. In nervous affections and sleeplessness in fevers. *Ellis.*

Infusion of Camphor.

℞ Camphor, one ounce.
Boiling water, eight fl. ounces.

Pour the water on the camphor, let stand till cold, and keep in well-stopped bottle. Dose, a tablespoonful, every hour or two, in nervous pervigilium and nervous irritability. *Ellis.*

Wine of Camphor.

℞ Powdered gum Arabic,
" camphor, each, one part.
Good white wine, forty-eight parts.

Triturate well together. *Ph. Germ.*
A turbid mixture. Dose, a teaspoonful to a tablespoonful.

Camphor Mixture.

℞ Powdered camphor, one drachm.
" gum Arabic,
" white sugar, each,
one drachm and a half.
Tincture of opium, forty drops.
Mint water, four fl. ounces.

Mix. A tablespoonful every two hours, in low conditions of the system. *Ellis.*

℞ Camphor water, three fl. ounces.
Compound spirit of
lavender, one fl. ounce.
Sugar, one drachm.

Mix. Give a tablespoonful every two hours, in diarrhœa and cholera morbus, adding ten drops of laudanum, when there is much pain. This is the celebrated mixture of *Dr. Jos. Parrish.*

℞ Powdered camphor, one scruple.
" gum Arabic, one
drachm.
" sugar, sufficient.
Cinnamon water, one fl. ounce.

Mix. To relieve the pain in dysmenorrhœa. One-half to be given as soon as pain is felt; if not relieved in an hour or two, the remainder to be taken. *Dewees.*

℞ Powdered camphor, half a drachm.
" gum Arabic, two
drachms.
" sugar, three drachms.
Vinegar, half an ounce.
Water, six ounces.

Mix. As a stimulant. *Phœbus.*

Emulsion of Camphor.

℞ Camphor,
Olive oil, each, one drachm.
Powdered gum
Arabic, half an ounce.
Water, four fl. ounces.

Triturate the camphor and oil together, until uniformly mixed; add the gum, and then the water gradually, triturating till the emulsion is formed. *W. Procter.*

Camphor and Milk.

℞ Camphor, one drachm.
Boiling milk, four fl. ounces.

Dissolve. To be used as a stimulant. *Ellis.*

Camphor with Myrrh.

℞ Powdered camphor, one drachm.
" myrrh, half a drachm.
" sugar, two drachms.
Water, six fl. ounces.

Mix. A tablespoonful every two hours. *Ellis.*

Spirit of Camphor.

℞ Camphor, four ounces.
Alcohol two pints.

Dissolve. *U. S. Ph.*
Most other pharmacopœias direct one part of camphor to nine parts of alcohol.
Chiefly used as an anodyne embrocation. Dose, ten to twenty drops.

Tincture of Camphor and Saffron.

℞ Camphor, one ounce.
Saffron, one scruple.
Alcohol, one pint.

Macerate for a day, and filter. *Guibourt.*
As a lotion, or fomentation.

Ethereal Tincture of Camphor.

℞ Camphor, one ounce.
Sulphuric ether, eight fl. ounces.

Dissolve. *Swediaur.*
Dose, twenty to thirty drops, in wine, as a stimulant and antispasmodic.

Mixture of Tincture of Camphor.

℞ Tincture of camphor,
Goulard's extract, equal parts.

Mix. As a lotion, several times a day, to parts disposed to ulcerate by constant decubitus. *Tott.*

Mixture of Camphor and Chloroform.

℞. Camphor, one drachm.
Chloroform, half a fl. drachm.
Mix, and add
Yolk of egg, one.
Triturate, and add gradually
Water, six fl. ounces.
As a stimulant. Dose, two fl. drachms to fl. half ounce. *Keating.*

Mixture of Camphor and Ether.

℞. Camphor, one scruple.
Sulphuric ether, two drachms.
Dissolve, and add
Laudanum, twenty drops.
Cinnamon water, six ounces.
Mix. A spoonful every three or four hours as a stimulant. *Augustin.*

Lotion of Camphor.

℞. Spirit of camphor, one part.
Sea salt, six parts.
Water, one hundred parts.
Officinal ammonia water, twelve parts.
This is *Raspail's Sedative Water*, No. 1. *Paris Codex.*
In No. 2 the ammonia water is increased to sixteen, and in No. 3 to twenty parts.
In cerebral congestions, rheumatic affections, etc.

Camphor Liniment. (Camphorated Oil.)

℞. Camphor, three troyounces.
Olive oil, twelve troyounces.
Dissolve the camphor in the oil. *U. S. Ph. Paris Codex* and *Ph. Germ.* direct one part of camphor to nine parts of the oil.
As an anodyne embrocation.

Compound Camphor Liniment.

℞. Camphor, two ounces and a half.
Stronger solution of ammonia, five fl. ounces.
Oil of lavender, one fl. drachm.
Alcohol, fifteen fl. ounces.
Dissolve camphor and oil in alcohol, add ammonia gradually, shaking until clear. *Brit. Ph.*
A rubefacient and anodyne embrocation.

℞. Camphor, one drachm.
Oil of chamomile,
Wine of opium, each, two drachms.
Oil of hyoscyamus, one ounce.
Mix. *Augustin.*

Liniment of Camphor and Vinegar.

℞. Tincture of camphor, three fl. ounces.
Acetic acid, one fl. drachm.
Mix. As a lotion or embrocation. *Ellis.*

Ethereal Camphor Liniment.

℞. Soft soap,
Alcohol, each, one ounce.
Dissolve and add
Camphor, half an ounce
dissolved in
Sulphuric ether, one fl. ounce.
As an embrocation. *Saunders.*

Ward's Essence for Headache.

℞. Camphor, two ounces.
Rectified spirit, fourteen ounces.
Water of ammonia, two ounces.
Oil of lavender, half an ounce.
Mix. As an application to the forehead, etc., in headache. *Redwood.*

Camphor Water Mixture.

℞. Camphor water,
Solution of acetate of ammonium, each, half a fl. oz.
Antimonial wine,
Tincture of opium, each, twenty drops.
Mix. To be taken at bedtime, as a stimulating diaphoretic. *Ellis.*

Camphor Clyster.

℞. Camphor, one drachm.
Olive oil, two ounces.
Mix. An excellent enema in cases of ascarides, to be used for three or four successive nights. *Ellis.*

℞. Common clyster, two pints.
Camphor, two drachms.
Yolk of egg, one.
Mix. A fourth part to be injected at a time. To be employed as occasion may require in low fevers. *Chaussier.*

Camphorated Tooth Powder.

℞. Prepared chalk, fifteen ounces.
Powdered camphor, one ounce.
Mix, and pass through a fine sieve. *Cooley.*

Camphor Ointment.

R. White wax, one ounce.
Lard, nine ounces.
Melt together, and add
Powdered camphor, three ounces.
Mix. *Paris Codex.*

Compound Camphor Ointment.

R. Lard, Suet, Oil of bayberries, Wax, each, half an ounce.
Melt together, and add
Camphor, one drachm.
Said to be efficacious as an application to chilblains. *Radius.*

R. Fresh butter, three drachms.
Spermaceti, two drachms.
White wax, three ounces.
Melt together, and add
Powdered camphor,
Oxide of zinc, each, three grains.
To be applied in chronic inflammation of the eyelids, to the affected parts, at night. *Maternite.*

R. Camphor, one drachm.
Basilicon ointment, one ounce.
Soap, half an ounce.
Powdered mustard, one scruple.
Mix. As an external application in lumbago. *Ferriar.*

Camphor Collyrium.

R. Camphor water, six fl. ounces.
Solution acetate of ammonium, two fl. ounces.
Mix. A mild astringent and stimulant in inflammation of the eyes. *Ellis.*

Liniment of Camphor and Turpentine.

R. Oil of turpentine, fifteen parts.
Camphor, one part.
Mix. As a stimulating embrocation. *Béral.*

Nitrate of Camphor.

R. Nitric acid, at will.
Camphor, sufficient
to saturate. Decant. Ten drops every two hours, on sugar, or in syrup, in chronic pleurisy. Also used as a friction in rheumatism and palsy. *Van Mons.*

Camphorated Cough Mixture.

R. Camphor, half a scruple.
Mucilage of gum Arabic, three ounces.
Syrup of mallows, one ounce and a half.
Mix. A tablespoonful every two hours. *Saunders.*

CAMPHORA MONOBROMATA.

Monobromated Camphor.

R. Camphor, thirteen troyounces.
Bromine, twelve troyounces.

Put the camphor into a quart retort, filling first its neck with some of the broken camphor; place the retort with its beak sufficiently elevated to return any liquid which may condense there back into the retort; lengthen the beak by connecting it with a glass tube two feet in length, bent down at its farther end, and by means of India-rubber and glass tubing made to dip into water, either pure or containing an alkali or a carbonate to combine with the hydrobromic acid which is evolved during the operation. Add the bromine in four or five portions, using towards the last not over two ounces at a time; after each addition of bromine apply heat, just sufficient to start the reaction, remove the heat at once, let the reaction proceed spontaneously, and afterwards allow the retort to cool before more bromine is added. After all the bromine has been used, insert a thermometer, heat the retort very gradually to about 270°, let it cool to 130°, add gradually twelve ounces of petroleum benzin, and pour the solution into a beaker-glass containing some warm water and pieces of marble; stir occasionally while cooling, and after twelve hours collect the crystals upon a funnel, wash them, and afterwards recrystallize from benzin once or twice until the crystals are not colored brown on exposure to light and air. More crystals may be obtained from the mother liquors by evaporating the solvent, heating the residue gradually at 500°, and recrystallizing the black mass repeatedly from petroleum benzin. *Maisch.*

It has a camphoraceous odor and taste, is volatile, insoluble in water, and freely soluble in alcohol and ether. It is a sedative to the nervous system, and given in hourly doses of two grains or more, until from twenty to sixty grains have been taken in twenty-four hours. *Deneffe.*

Dose, in infantile convulsions, one grain; in hysteria and nervous headache, three or four grains; two or three doses usually afford relief. It is best given in the form of pill with conserve of roses, or suspended in mucilage and syrup. *Hammond.*

CANELLA.

Canella.

This is the bark of the *Canella alba*, a large tree, native of Jamaica and other West India islands.

Sex. Syst. Dodecand. monog. *Nat. Syst.* Meliaceæ.

Swartz, Trans. Linn. Soc. 1. 96. Griffith, Med. Bot. 181.

The part used is the bark, which is of a pale orange-yellow color, with an aromatic odor, and a warm, bitterish, pungent taste. It is principally used as an adjuvant to other remedies. The dose, as a stimulant, is from ten grains to a scruple.

Powder of Canella and Aloes.

℞ Aloes, one pound.
Canella, three ounces.

Rub into a fine powder, and mix. This is much used in amenorrhœa. Dose, ten to twenty grains. *U. S. Ph.*

℞ Powdered aloes, one drachm and a half.
" canella, eighteen grains.
" serpentaria, twelve grs.

Mix, and divide into six powders. Give one powder, every three hours, in syrup. This and the preceding are generally termed *hiera picra*. *Ellis.*

Tincture of Hiera Picra.

℞ Powder of aloes and canella, one ounce and a half.
Brandy, one pint.

Macerate ten days.

A popular and most efficient remedy in amenorrhœa. Dose, a teaspoonful. *Ellis.*

CANNABIS.

Hemp.

The *Cannabis sativa* is an annual plant, a native of Asia, but generally cultivated in Europe and the United States. The East Indian plant is more powerful in its action on the system than that growing in more temperate climates, and is the kind most generally used in medicine. It is designated in the *U. S. Ph.* as *Cannabis Indica*, and the flowering tops of the same plant cultivated in this country are recognized under the name of *Cannabis Americana*.

Sex. Syst. Dicec. pentand. *Nat. Syst.* Cannabinaceæ.

Linn. Sp. Pl. 1457. Griffith, Med. Bot. 572.

The parts used are the seeds, the leaves, with the flowering tops and portions of the stems; the latter are covered with a resinous exudation, which is narcotic and intoxicating. They have been recommended in a variety of diseases of a formidable character.

Extract of Indian Hemp.

℞ Dried Indian hemp, twelve troyounces.

Exhaust by percolation with alcohol, distil, and evaporate to the proper consistence. *U. S. Ph.*

The *extract of American hemp* is prepared in the same manner. The other pharmacopœias direct maceration or digestion of the hemp tops in alcohol.

Has been given with success in tetanus, hydrophobia, cholera, etc. Dose, one to ten grains. To be increased as occasion may require.

Purified Extract of Hemp.

℞ Commercial extract of hemp, one ounce.
Alcohol, four fl. ounces.

Dissolve, let the dregs subside, decant and evaporate the clear solution on a water-bath, to the consistence of an extract. Dose, half a grain. *U. S. Ph.* 1860.

Tincture of Hemp.

℞ Extract of hemp, one ounce.
Rectified spirit, (imp.) a pint.

Dose, five to twenty minims, in neuralgia, etc. *Brit. Ph.*

U. S. Ph. directs to dissolve six drachms of the extract in one pint of alcohol; *Ph. Germ.* dissolves one part of extract in nineteen parts of alcohol.

℞ Indian hemp, one part.
Alcohol, sufficient.

Obtain by percolation five parts of tincture. *Paris Codex.*

In tetanus, one drachm every half hour, till some effect is produced. In cholera, ten drops every half hour; in other diseases, every two hours. *O'Shaughnessy.*

Emulsion of Hemp-seed.

℞ Hemp-seed, bruised, six drachms.
Gum Arabic, one drachm.
Parsley water, five fl. ounces.

Rub together so as to form emulsion, strain, and add

Syrup of balsam of Peru, one ounce.

A spoonful every hour in gonorrhœa. *Radius.*

Resin of Hemp.

℞ Dried hemp-tops, bruised, at will.

Macerate several times in warm water, and then in a solution of carbonate of sodium;

afterwards, wash well with water, pressing after each operation. Dry, and digest in rectified spirit, to which milk of lime, containing an ounce of lime to each pound of hemp-tops, has been added. Filter, add a slight excess of sulphuric acid; again filter, distil off most of the spirit, add to the residue three or four times its bulk of water, evaporate the rest of the spirit, decant the water, wash and dry. Dose, two-thirds of a grain. *Smith.*

CANTHARIS.

Spanish Fly.

The *Cantharis vesicatoria* is an insect inhabiting those parts of Europe in which the vine grows naturally. It has a fetid odor and an acrid taste. The body is oblong, of a golden-green color. Spanish flies are stimulant, diuretic, rubefacient, and vesicant. They are used internally in dropsies, and in various disorders of the urinary organs; externally, to irritate or vesicate. Several species are natives of the United States, which are not inferior in their powers to the foreign insect. Cantharidin, their active principle, is soluble in ether, chloroform, the oils, and boiling alcohol. Dose of the flies, one to two grains.

Powder of Cantharides and Savine.

℞. Powdered cantharides, two grains.
" savine, one drachm.

Mix, and divide into four powders. One to be taken at night as an emmenagogue, watching its effects closely. *Ellis.*

Powder of Cantharides and Camphor.

℞. Powdered cantharides, four grains.
" camphor, eight grains.
Sugar of milk, three drachms.

Mix, and divide into eight powders, one to be given twice a day as a diuretic. *Augustin.*

Pills of Cantharides and Camphor.

℞. Powdered cantharides, eighteen grains.
" opium,
" camphor, each, thirty-six grains.

Mix, and form into thirty-six pills. One to be taken at bedtime, in cases of impotency from general debility. *Ellis.*

Pills of Cantharides and Iron.

℞. Powdered cantharides, one scruple.
Subcarbonate of iron, two scruples.
Extract of liquorice, one drachm.

Form a mass, and divide into pills of one grain each. Dose, three or four, three times a day, gradually augmenting the dose. As a diuretic. *Meissner.*

Pills of Cantharides and Capsicum.

℞. Powdered cantharides, five grains.
" capsicum, eight grains.
" camphor, one scruple.
" guaiacum, one drachm.
Tincture of colocynth, sufficient.

Form mass, and divide into eighty pills. Dose, one, gradually increasing to four or five, twice a day, in paraplegia. *Sundelin.*

Infusion of Cantharides.

℞. Cantharides, one scruple.
Boiling water, sufficient

to obtain three ounces of infusion, after digesting for half an hour, and straining. *Soubeiran.*

Acetic Infusion of Cantharides.

℞. Powdered cantharides, two ounces and a half.
Acetic acid, two pints.

Digest for fourteen days and filter. Recommended for blistering of the scalp without removing the hair. *Mettauer.*

Emulsion of Cantharides.

℞. Cantharides, one scruple.
Sweet almonds, six drachms.
Sugar, one ounce.

Beat together, and gradually rub up with

Lime water, ten ounces.

Strain. A spoonful every two or three hours in neuralgia, and in catarrh of the bladder. *Berends.*

Hufeland's formula, recommended in hooping-cough, substitutes *hot water* for the lime water.

Emulsion of Oil of Cantharides.

℞. Oleo-infusion of cantharides, one drachm and a half.
Yolk of egg, one.
Gum Arabic, two drachms.

Honey, one troyounce.
Juniper water, three troyounces.

Make an emulsion. A spoonful, in dropsy, mania, etc. It is one of the most convenient preparations for the internal administration of cantharides. *Guibourt.*

Vinegar of Cantharides.

℞. Powdered cantharides, two ounces.
Glacial acetic acid, two fl. ounces.
Acetic acid, sufficient.

Add the glacial acetic acid to thirteen fl. ounces of acetic acid, and digest the cantharides in the mixture for two hours, at a temperature of 200°. When cool transfer to a percolator and percolate with 5 fl. ounces of acetic acid. Express residue, filter, add filtrate to percolate and enough acetic acid to obtain twenty fl. ounces. *Brit. Ph.*

As an epispastic, or as a rubefacient lotion.

Tincture of Cantharides.

℞. Cantharides, bruised, one ounce.
Diluted alcohol, sufficient.

Obtain by displacement two pints of tincture. *U. S. Ph.*

A very convenient mode of administering cantharides. Dose, from ten to twenty drops. Also useful as a rubefacient. The tincture of the *Brit. Ph.* is less than half this strength.

℞. Powdered cantharides, one part.
Alcohol, ten parts.

Macerate for eight days, express, and filter. *Paris Codex* and *Ph. Germ.*

More than three times stronger than tincture of *U. S. Ph.* It is better adapted for liniments, hair washes, etc.

Camphorated Tincture of Cantharides.

℞. Tincture of cantharides, half an ounce.
Camphor, three drachms.
Alcohol, two ounces.

Mix. As a rubefacient. *Pierquin.*

Compound Tincture of Cantharides.

℞. Cantharides, one drachm.
Mustard, Black pepper, Camphor, each, half an ounce.
Garlic, one bulb.
Vinegar, six ounces.
Alcohol, twelve ounces.

Macerate for some days, express, and filter. Said to be very effectual as a rubefacient lotion in rheumatism, etc. *Foy.*

℞. Tincture of cantharides,
Extract of rosemary, each, one drachm.
Solution of carbonate of potassium, one drachm and a half.
Water, four fl. ounces.

Mix. As a lotion to promote the growth of hair, where it has been lost from an eruption, or from fever. *Sachse.*

Tincture of Cantharides and Guaiacum.

℞. Powdered cantharides, one drachm.
" guaiacum, forty-five grains.
Contused rhubarb, one drachm and a half.
" shell-lac, half a drachm.
Alcohol, twelve fl. ounces.

Digest, and strain. Dose, from thirty to fifty drops, night and morning, in some demulcent. In gleet. *Ellis.*

Ethereal Tincture of Cantharides.

℞. Powdered cantharides, one part.
Acetic ether, ten parts.

Macerate for ten days, express, and filter. *Paris Codex.*

As a rubefacient and vesicant lotion; it is very energetic.

℞. Powdered cantharides, three ounces.
Spirit of nitrous ether, two pints and a half.

Digest for eight days, and filter.

Used for the same purposes as the last. *Mettauer.*

Blistering Liquid.

℞. Powdered cantharides, eight ounces.
Acetic acid, four fluidounces.
Ether, sufficient.

Mix cantharides and acid, pack in a percolator, macerate for twenty-four hours, and displace slowly with ether until twenty fluidounces are obtained. *Brit. Ph.*

Cantharidal Ether.

℞. Powdered cantharides, one part.
Sulphuric ether, two parts.

Digest for three days, and express. The product is a green oil containing cantharidin, resin, and coloring matters. If the undiluted oil be brushed a few times over a part, it causes vesication. *Oettinger.*

Camphorated Ethereal Tincture of Cantharides.

℞. Powdered cantharides, one part.
Nitrate of camphor, three parts.
Alcohol, fifty-six parts.

Digest and express, and filter at the end of a few days. Advised in dropsy in dose of ten to twenty drops, in white wine. *Van Mons.*

Extract of Cantharides.

℞. Powdered cantharides, one part.
Alcohol of 60 per cent., six parts.

Moisten the cantharides with alcohol, pack into a percolator, macerate for twelve hours, and pour on remainder of alcohol. Continue the displacement with water until the percolate commences to render the tincture turbid. Distil and evaporate to proper consistence. *Paris Codex.*

Ethereal Extract of Cantharides.

℞. Powered cantharides, at will.
Sulphuric ether, sufficient.

Treat the powder with the ether in a displacement funnel, properly arranged, until exhausted, and distil off the ether. Flies yield 8 per cent. of this extract. It is employed for increasing the activity of blistering plasters, and for admixture with wax to make blistering tissue-paper. *Soubeiran.*

Oleo-infusion of Cantharides.

℞. Cantharides, in coarse powder, one part.
Olive oil, ten parts.

Digest for six hours on a water-bath, express, and filter. *Paris Codex.*

An active rubefacient and vesicant.

℞. Cantharides, one part.
Oil of rosemary, eight parts.

Digest for fifteen days, express, and filter. More active than the preceding. *Béral.*

℞. Powdered cantharides, one part.
Chloroform,
Castor oil, each, one and a half parts.

Mix, let stand in a close vessel for some hours, and then pass through a displacement apparatus.

This oil vesicates promptly, when applied to a part, and covered with oiled silk. *E. Dupuy.*

Liniment of Cantharides.

℞. Powdered cantharides, one ounce.
Oil of turpentine, half a pint.

Digest for three hours over a water-bath, and strain. *U. S. Ph.*

An active stimulant when applied to the skin; used with success in the low stages of typhus fevers. Requires caution in its use.

Liniment of Cantharides and Camphor.

℞. Camphor, three drachms.

Dissolve in

Liniment of cantharides, half fl. ounce.

Add

Strong mercurial ointment,
Simple ointment, each, one ounce.

Mix, and form liniment. In low stages of fever, where the object is to arouse the system, and to affect it with mercury, also as an application to tumors. *Ellis.*

Decoction of Cantharides in Turpentine.

℞. Cantharides in powder, four ounces.
Oil of turpentine, twelve ounces.

Mix in a flask, place this in a salt-bath, and heat for four hours; then dissolve with oil of turpentine until twelve fl. ounces are obtained. Similar to the officinal liniment, but much more powerful. *Hartshorne.*

Liniment of Cantharides and Soap.

℞. Tincture of cantharides, half an ounce.
Liquid ammonia, an ounce and a half.
Turpentine soap, two ounces.
Spirit of turpentine, one ounce.
" camphor, eight ounces.

Mix. A powerful rubefacient. *Niemann.*

Cerate of Cantharides.

℞. Powdered cantharides, twelve troyounces.
Yellow wax,
Resin, each, seven troyounces.
Lard, ten troyounces.

Melt the wax, resin, and lard, strain, add the flies, and keep the mixture fluid for half an hour over a water-bath; remove from the fire and stir till cold. *U. S. Ph.*

The blistering plasters of *Brit. Ph.* and *Paris Codex* contain the same proportion of cantharides.

Cerate of Extract of Cantharides.

℞. Powdered cantharides, five troyounces.
Stronger alcohol, sufficient.
Resin, three troyounces.
Yellow wax, six troyounces.
Lard, seven troyounces.

Exhaust the cantharides in a percolator with the alcohol, distil the tincture, and evaporate until a soft extract is obtained; add this to the melted resin, wax, and lard, keep the mixture at 212° F. for fifteen minutes, strain, and stir till cold. *U. S. Ph.*

An efficient and elegant cerate to replace the old-fashioned blistering plaster.

Cantharides Ointment.

℞. Cantharides cerate, two drachms.
Resin cerate, six drachms.

Mix thoroughly. *U. S. Ph.*

As a stimulating dressing to blisters.

℞. Catharides, one part.
Olive oil, four parts.

Digest for twelve hours, express, filter, and add

Yellow wax, two parts.

Melt together and cool. *Ph. Germ.*

The ointment of *Brit. Ph.* is almost identical with this.

Compound Ointment of Cantharides.

℞. Yellow wax, three parts.
Resin, six parts.
Common turpentine, twelve parts.
Lard, fifty parts.

Melt together and add very fine powders of

Cantharides, ten parts.
Euphorbium, two parts.

Mix thoroughly. *Ph. Germ.*

Ointment of Extract of Cantharides.

℞. Alcoholic extract of cantharides, eight grains.
Oil of roses, one drop.
Beef marrow, two ounces.
Oil of lemon, forty minims.

Melt the marrow, add the extract, and stir in the essential oils.

To promote the growth of the hair. *M. Cap.*

Cantharides Plaster.

℞. Powdered cantharides, two parts.
Common olive oil, one part.

Digest for two hours in a water bath, add

Yellow wax, four parts.
Common turpentine, one part.

Previously melted, and mix. *Ph. Germ.*

Firmer and more adhesive than the cerate.

Pitch Plaster with Cantharides.

℞. Burgundy pitch, forty-eight troyounces.
Cerate of cantharides, four troyounces.

Heat the cerate to 212° for fifteen minutes, strain, and melt together with the pitch. *U. S. Ph.*

℞. Cantharides, in coarse powder,
Expressed oil of nutmeg,
Yellow wax,
Resin, each, four ounces.
Soap plaster, fifty-two ounces.
Resin plaster, thirty-two ounces.
Boiling water, twenty ounces.

Infuse the cantharides in the water for six hours, express strongly, evaporate to one-third, add the other ingredients, melt, and stir well until cool. *Brit. Ph.*

Warming Plaster. Used as a counter-irritant.

Perpetual Cantharides Plaster.

℞. Resin,
Yellow wax, each, fifty parts.
Common turpentine, thirty-seven parts.
Burgundy pitch, twenty-five parts.
Suet, twenty parts.

Melt together with a moderate heat, and add very fine powders of

Cantharides, eighteen parts.
Euphorbium, six parts.

Irritant and slow vesicant. *Ph. Germ.*

Camphorated Cantharides Plaster.

℞. Plaster of melilot, two ounces.

Melt and add

Powdered cantharides, six drachms.
Camphor, half a drachm.

As a vesicant. *Spielmann.*

Odontalgic Plaster with Cantharides.

℞. Pitch,
Resin, each, one ounce.

Melt together, and add

Storax,
Cantharides, each, two ounces.

As an irritant plaster to the cheek in cases of toothache. *Van Mons.*

Issue Ointment.

℞. Powdered Spanish flies, half an ounce.
Rose water, two fl. ounces.

Boil and add

Tartar emetic, fifteen grains.

Evaporate to one-half, strain, and add

Olive oil, three ounces.
White wax, one ounce and a half.
Spermaceti, one ounce.

Boil till all moisture is evaporated. Used as a stimulating application to issues. *Physick.*

Cantharides Pomatum.

℞. Powdered Spanish flies, one drachm.
Alcohol, one ounce.

Macerate and filter. Ten parts of this tincture are to be well incorporated with ninety parts of lard. Said to be very effectual in preventing the hair from falling off. *Dupuytren.*

Cantharides (Blistering) Paper.

℞. White wax, four troyounces.
Spermaceti, one troyounce and a half.
Olive oil, two troyounces.
Canada turpentine,
Powdered cantharides, each, half a troyounce.
Water, five fl. ounces.

Boil gently in a tinned vessel for two hours, constantly stirring, filter through a woollen strainer without expression, keep the mixture liquid by means of a shallow water-bath, and coat strips of paper upon one side only with the melted plaster by passing them over the surface of the liquid. *U. S. Ph.*

The formula of *Brit. Ph.* differs mainly in using twice the above weight of cantharides, and in digesting the substances, except the Canada turpentine, which is to be added to the strained plaster.

Blistering Cloth.

℞. Aqueous extract of cantharides, four parts.
Gelatin in solution, one part.

Mix and brush over a piece of waxed cloth spread in a frame. When the first layer dries, add a second and a third, always passing the brush in the same direction. *Paris Pharm. Society.*

Stimulating Liniment.

℞. Tincture of cantharides, one fl. drachm.
Soap liniment, six fl. drachms.

Mix. In indolent chilblains. *Wardrop.*

Aromatic Cantharides Liniment.

℞. Tincture of cantharides, Oil of thyme, Solution of ammonia, } equal parts.

Mix. A powerful rubefacient. *Augustin.*

Blistering Court Plaster.

℞. Cantharides, one drachm and a half.
Acetic ether, two ounces.

Infuse for eight days, decant, and add

Resin, two drachms.

Spread on court plaster. As a mild vesicant. *Cadet.*

Sparadrap of Cantharides.

℞. Purified elemi,
" resin, each, five ounces.
Yellow wax, nineteen ounces.
Basilicon cerate, eleven ounces.
Olive oil, two ounces.

Melt together and incorporate

Cantharides in fine powder, twenty-one ounces.

Spread the mixture while warm, upon oiled linen. *Paris Codex.*

Taffeta Cantharidalis.

℞. Cantharidal ether,
Sulphuric ether, each, one ounce.
Purified turpentine,
Colophony, each, two drachms.

Mix. A piece of taffeta is stretched on a frame, and twice painted over with a brush dipped in the solution; the process is repeated the next day, and again the third day, always passing the brush in the same direction. After a few days the taffeta is covered with a solution of isinglass. *Oettinger.*

Cantharidal Collodion.

℞. Cantharides, in fine powder, eight troyounces.
Pyroxylon, one hundred grains,

Canada turpentine, three hundred and twenty grains.
Castor oil, one hundred and sixty grains.
Stronger ether, a pint and a half.
Stronger alcohol, sufficient.

Press the cantharides firmly into a percolator, gradually pour on the ether, and reserve the first fifteen fluidounces of the ethereal tincture. Continue the percolation with stronger alcohol until half a pint of tincture is obtained; evaporate this spontaneously to one fl. ounce, mix with the reserved portion, and dissolve in the mixture the pyroxylon, turpentine, and oil.

U. S. Ph.

Hairwash.

℞. Aromatic spirit of ammonia, one ounce.
Tincture of cantharides, one or two drachms.
Glycerin, half an ounce.
Rosemary water, eleven ounces.

Mix. An active stimulant for the scalp.

Startin.

Shampoo Liquid.

℞. Rum, three quarts.
Alcohol, one pint.
Water, one pint.
Tincture of cantharides, half an ounce.
Carbonate of ammonium, half an ounce.
Carbonate of potassium, one oz.

Dissolve the carbonates in the water, and add the solution to the other ingredients mixed together, and shake up well. To remove dandruff from the hair, by moistening it with the mixture, rubbing, so as to form a lather, and then washing with cold water.

Morfit.

CAPSICUM.

Cayenne Pepper.

Several species of capsicum are used under the above officinal name, as *C. annuum*, *C. fastigiatum*, etc.. *C. annuum* is a native of Asia, but now generally cultivated in Europe and America.

Sex. Syst. Pentand. monog. *Nat. Syst.* Solanaceæ.

Linn. Sp. Pl. 270. Griffith, Med. Bot. 497.

Capsicum has a pungent smell, and a hot, bitterish, acrid taste. It is an active stimulant, and rubefacient. Dose, five to ten grains in powder or pill.

Cayenne Pepper Pills.

℞. Powdered Cayenne pepper, one drachm.
Crumb of bread,
Distilled water, each, sufficient.

Rub into mass and form twelve pills. One, three or four times a day. In debility of the stomach, especially from intemperance.

Ellis.

℞. Powdered Cayenne pepper, one scruple.
Extract of gentian, one drachm.
Powdered gentian, sufficient.

Form mass, and divide into sixty pills. In chronic dyspepsia.

Radius.

Cayenne Pepper Lozenges.

℞. Cayenne pepper, three drachms.
Ginger,
Horseradish, each, two drachms.
Sugar, one ounce.
Conserve of roses, one drachm.

Mix, and make thirty lozenges. One to be chewed occasionally in catarrhal deafness.

Fosbroke.

Cayenne Pepper Syrup.

℞. Simple syrup, two pints.
Tincture of Cayenne pepper, one fl. ounce.

Pour the tincture on the heated syrup, and evaporate it from the surface of the latter, until the vapor ceases to ignite on the approach of flame. Then mix immediately.

A. Smith.

Infusion of Cayenne Pepper.

℞. Cayenne pepper, half a troyounce.
Boiling water, one pint.

Infuse for two hours, and strain. Dose, half a fl. ounce.

U. S. Ph.

Cayenne Pepper Gargle.

℞. Tincture of Cayenne pepper, half fl. ounce.
Rose water, eight fl. ounces.

Mix.

℞. Powdered Cayenne pepper, two tablespoonfuls.
Common salt, a teaspoonful.
Boiling vinegar,
" water, each, half a pint.

Infuse for an hour, and strain. In bad cases of scarlatina.

Stephens.

℞ Powdered Cayenne pepper, half an ounce.
Magnesia, one drachm.
Boiling water,
" vinegar, each, eight ounces.

Infuse, and strain. Used in same cases, and in same manner, as above. *Headley.*

Tincture of Cayenne Pepper.

℞ Cayenne pepper, one ounce.
Diluted alcohol, sufficient.

Obtain by displacement two pints of tincture. *U. S. Ph.*

As a stimulant in low states of fever with gastric insensibility. Dose, one to two fl. drachms. Also used in a diluted state as gargle.

Tincture of *Brit. Ph.* is about same strength.

℞ Powdered capsicum, one part.
Alcohol, ten parts.

Macerate for eight days, express, and filter. *Ph. Germ.*

Nearly three times stronger than preceding.

Concentrated Tincture of Cayenne Pepper.

℞ Cayenne pepper, four ounces.
Rectified spirit, twelve fl. ounces.

Macerate for seven days, and strain. Used as an embrocation for toothache and chilblains. *A. Turnbull.*

Tincture of Cayenne Pepper and Cantharides.

℞ Cayenne pepper, one drachm.
Cantharides, ten drachms.
Alcohol, one pint.

Digest for two days, and filter. Dose, ten drops. *Coxe.*

Vinegar of Cayenne Pepper.

℞ Cayenne pepper, one part.
Vinegar, six parts.

Digest for some days, and filter. In doses of half a drachm to a drachm, in passive dropsies. *Béral.*

Oleo-resin of Capsicum.

℞ Powdered capsicum, twelve troyounces.
Ether, sufficient.

Pack capsicum firmly into a suitable percolator, obtain by slow displacement twenty-four fl. ounces of tincture, distil off most of ether, evaporate remainder spontaneously, and remove solid fat by straining. *U. S. Ph.*

Dose, one-half to one grain.

Extract of Cayenne Pepper.

℞ Powdered Cayenne pepper, eight ounces.
Diluted alcohol, sufficient.

Exhaust powder by displacement with diluted alcohol, and evaporate the tincture in a water-bath to the consistence of an extract. About two ounces of extract are obtained. Dose, one or two grains made into pills. *W. C. Bakes.*

Cerate of Cayenne Pepper.

℞ Extract of Cayenne pepper, one drachm.
Simple cerate, one ounce.

Rub together. This acts as a rubefacient in twenty or thirty minutes. *W. C. Bakes.*

Cayenne Pepper Cataplasm.

℞ Powdered Cayenne pepper, one ounce.
Ground mustard,
Common soap, each, three ounces.
Alcohol, sufficient.

Mix. An active rubefacient. *Ammon.*

Lotion of Cayenne Pepper.

℞ Tincture of Cayenne pepper,
Spirit of camphor,
each, four fl. ounces.
Solution of ammonia, two fl. ounces.

Mix. A very powerful rubefacient. *Ammon.*

CARBO ANIMALIS.

Animal Charcoal.

This article is prepared by charring animal substances, usually bones. It requires purification for internal use.

Purified Animal Charcoal.

℞ Animal charcoal,
Muriatic acid,
each, twelve troyounces.
Water, twelve fl. ounces.

Mix the acid and water, and pour on charcoal; digest for two days, occasionally

stirring. Decant, and wash the charcoal frequently with water, and dry it. *U. S. Ph.*

℞. Lean of beef or mutton, two parts.
Broken bones, one part.

Char by a moderate fire in a coffee-roaster, let cool and pulverize. *Weise.*

Has been given with advantage in scrofulous diseases, chronic glandular swellings, etc., in doses of ten to twenty grains.

Powder of Animal Charcoal.

℞. Animal charcoal, four grains.
Sugar, one drachm.

Mix. To be taken morning and evening, in scrofula. *Weise.*

℞. Animal charcoal, six grains.
Burnt sponge, twelve grains.
Powdered liquorice root, half a drachm.

Mix, and form six powders. One to be taken morning and night, in scirrhous goitre. *Riecke.*

℞. Animal charcoal, four grains.
Powdered liquorice root, four scruples.

Mix, and divide into eight powders, one to be taken morning and evening, dry; a little water drank afterwards. After the eight powders are taken, increase the dose, by half a grain at a time, to four grains. In scirrhous tumors of the breast. A spare diet to be observed. *Weise.*

℞. Animal charcoal, one scruple.
Subcarbonate of iron,
Sugar, each, two scruples.

Mix, and divide into ten powders. One three or four times a day in incipient hypertrophy of the womb or ovaries. *Clarus.*

Troches of Animal Charcoal.

℞. Animal charcoal, one part.
Sugar, eight parts.

Mix, and with mucilage of tragacanth form mass, which divide into lozenges of ten grains each. *Radius.*

Ointment of Animal Charcoal.

℞. Animal charcoal, one part.
Lard, two parts.

Rub together. *Giordano.*

℞. Animal charcoal, half an ounce.
Ointment of mallows, six drachms.

Mix. As a friction to glandular engorgements. *Radius.*

CARBO LIGNI.

Charcoal

Is employed in medicine as an antiseptic and absorbent, and has been found useful in dyspepsia, etc. It also enters into the composition of poultices, etc.

Charcoal Dentifrice Powder.

℞. Powdered charcoal, four troyounces.
" cinchona, two troyounces.
Oil of mint, ten grains.

Mix. *Paris Codex.*

℞. Powdered charcoal, four parts.
" Peruvian bark, two parts.
" myrrh, one part.

Mix. *Ph. Slesv.*

℞. Powdered charcoal, three drachms.
" Peruvian bark, two drachms.
" calamus, one drachm.
" myrrh, half a drachm.
Oil of cloves, three drops.

Mix. *Sartori.*

℞. Powdered charcoal, } each,
" red saunders, } each,
" orange-peel, } each,
" Peruvian bark, } each,
" cremor tartar, } each, one drm.
Oil of bergamot, twenty drops.

Mix. *Schubarth.*

Compound Charcoal Powder.

℞. Charcoal, four drachms.
Magnesia, three drachms.
Rochelle salt, two troyounces.

Powder separately, and mix. Antacid and laxative. *Maryl. Coll. Ph.*

If carbonate of magnesium is preferred to magnesia, four drachms of the former should be used.

Powder of Charcoal and Quassia.

℞. Powdered charcoal, six drachms.
" quassia,
Magnesia, each, one drachm.

Mix. Dose, a teaspoonful, two or three times a day, in pyrosis. *Heim.*

Charcoal Lozenges.

℞. Powdered charcoal,
" sugar, each, one ounce.
" vanilla, one drachm.
" chocolate, three ounces.
Mucilage of tragacanth, sufficient.

Beat together, and form lozenges of eighteen grains. For fetid breath. *Chevallier.*

℞. Powdered charcoal, one part.
Sugar, three parts.

Mix, and with mucilage of tragacanth form lozenges of fifteen grains each. *Paris Codex.*

Charcoal Electuary.

℞. Powdered charcoal,
Carbonate of sodium, each, one drachm.
Electuary of senna, two ounces.

Mix. Two or three teaspoonfuls a day in obstinate constipation. *Radius.*

Charcoal Tooth Paste.

℞. Powdered charcoal, } each,
" orris root, } one
" Peruvian bark, } scruple.
Tincture of myrrh, half a drachm.
Clarified honey, sufficient.

Mix. Used as a dentifrice. *L. W. Sachs.*

Ointment of Charcoal.

℞. Powdered charcoal,
Storax ointment, each, one ounce.
Camphor,
Myrrh, each, two drachms.
Spirit of turpentine, sufficient.

Rub well together. As a dressing to fetid ulcers. *Rust.*

Charcoal Cataplasm.

℞. Freshly prepared charcoal, sufficient.

Mix with

Simple cataplasm in a tepid state. *Dub. Ph.*

As an application to foul and gangrenous ulcers.

℞. Powdered charcoal, half an ounce.
Cataplasm of chamomile, five pounds.

Mix. As above. *Brera.*

Charcoal Suppository.

℞. Cork charcoal,
Wax, each, one part.
Fresh butter, two parts.

Mix. As a suppository in hemorrhoids. *Cadet.*

CARBO MINERALIS.

Mineral Coal.

Anthracokali.

℞. Carbonate of potassium, six oz.
Lime, three and a half ounces.
Water, four pints.

Proceed as in making liquor potassa, and concentrate the clear solution, by boiling in an iron pot, till an oily-looking liquid remains, then stir in five ounces of finely-powdered mineral coal; remove from the fire, and continue stirring till the whole is reduced to an uniform powder, which is to be immediately put in small, well-stopped bottles. *Polya.*

Much recommended in cutaneous diseases, scrofula, chronic rheumatism, etc. Dose, two grains, twice or thrice a day.

Powder of Anthracokali.

℞. Anthracokali, two grains.
Powdered liquorice, five grains.

Mix. Two to four times a day. *Polya.*

Compound Powder of Anthracokali.

℞. Anthracokali, two grains.
Washed sulphur, three to five grains.
Powdered liquorice, two to three grains.

Mix. In psora, etc. *Polya.*

℞. Anthracokali, two grains.
Calomel, one-sixth of a grain.
Powdered liquorice, three grains.

Mix. In syphilitic eruptions. *Polya.*

℞. Anthracokali,
Golden sulphuret of antimony, each, half a grain.
Powdered liquorice, three grains.

Mix. *Polya.*

Sulphuretted Anthracokali.

℞. Prepared like the simple anthracokali, adding four drachms of sulphur to the coal, and dissolving, etc., as above.

The dose and uses are the same. *Polya.*

CARBONIS IODIDUM.

Iodide of Carbon.

℞. Tincture of iodine, two fl. ounces.
Solution of potassa, sufficient.

Add the solution of potassa to the tincture till the latter loses its color, then add

Distilled water sufficient

to precipitate the iodide, separate, and dry by a gentle heat.

Ointment of Iodide of Carbon.

℞. Iodide of carbon, half a drachm.
Simple ointment, six drachms.

Rub together. As an application to enlarged glands, and obstinate cutaneous affections. *Litchfield.*

CARDAMINE.

Cuckoo Flower.

This is the *Cardamine pratensis*, a small herbaceous plant, a native of Europe, and also found in the more northern parts of America.

Sex. Syst. Tetrad. siliquos. *Nat. Syst.* Brassicaceæ.

Linn. Sp. Pl. 915. Baker, Med. Trans. 1 442.

The part employed is the flowers, which are said to be diuretic and antispasmodic. It is not used in this country, and appears to be little deserving of notice.

CARDAMOMUM.

Cardamom.

Under the name of Cardamom a variety of aromatic capsules have been used in medicine, all possessing the same properties and somewhat the same appearance. That recognized by the pharmacopœias is the product of the *Elettaria Cardamomum*, a native of Malabar.

Sex. Syst. Monand. monog. *Nat. Syst.* Zingiberaceæ.

Maton, Trans. Linn. Soc. x. 254. Griffith, Med. Bot. 633.

The part used is the seeds; these are angular, somewhat rough, of a reddish or brownish color, with an agreeable fragrant odor, and a warm, aromatic taste. They are seldom used alone, being chiefly employed in compound preparations.

Aromatic Powder.

℞. Ginger,
Cinnamon, each, two troyounces.
Cardamom, deprived of the capsules,
Nutmeg, grated, each, one ounce.

Rub the ingredients in the form of powder, until thoroughly mixed. *U. S. Ph.*

Stimulant and carminative. Dose, ten to thirty grains, in dyspepsia with flatulence. See also Compound Powder of Cinnamon.

Aromatic Confection.

℞. Aromatic powder, four troyounces.
Clarified honey, sufficient.

Rub together, and beat into a mass. *U. S. Ph.*

Used as a stimulant to the stomach, in doses of ten to sixty grains.

Tincture of Cardamom.

℞. Cardamom, bruised, four ounces.
Diluted alcohol, sufficient.

Obtain by percolation, two pints. *U. S. Ph.*

A pleasant, aromatic stimulant. Dose, one to two fl. drachms.

Compound Tincture of Cardamom.

℞. Powdered cardamom, six drachms.
" caraway, two drachms.
" cochineal, one drachm.
" cinnamon, five drachms.
Honey, two troyounces.
Diluted alcohol, sufficient.

Percolate the mixed powders with the diluted alcohol to obtain thirty-eight fl. ounces of tincture, and add the honey. *U. S. Ph.*

The tincture of *Brit. Ph.* is very similar, raisins being employed in place of the honey.

An agreeable aromatic and carminative, in the dose of one or two fl. drachms.

Ethereal Extract of Cardamom.

℞. Cardamom, in powder, at will.
Sulphuric ether, sufficient.

Treat, till twice the weight of the seed is obtained. Evaporate spontaneously until deprived of ether. This extract is fluid, and consists of volatile and fixed oil. It may be used for aromatizing powders, or as an addition to pills. *W. Procter.*

CAROTA.

Carrot.

The seeds and root of the common carrot, *Daucus carota*, a native of Europe, but now extensively naturalized in the United States, and generally cultivated as an esculent in both countries.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Linn. Sp. Pl. 348. Griffith, Med. Bot. 337.

The parts used are the fruit and root; the former alone is recognized in the *U. S. Ph.*; they are aromatic, and have a pungent, bitterish taste; the root of the wild carrot has a strong smell, and an acrid, disagreeable taste; both these are similar in their remedial effects, being aromatic and diuretic. The root of the cultivated variety is milder, and is not used internally, but has much reputation as an external application to foul ulcers, etc.

Infusion of Carrot Fruit.

℞ Carrot fruit, half an ounce—one ounce.
Boiling water, one pint.

Infuse. To be taken during the day as a diuretic, in dropsy and nephritic complaints.

Cataplasm of Carrot Root.

℞ Root of garden carrot, at will.

Scrape down to a pulp. As an application to foul and cancerous ulcers. *Wood.*

℞ Root of garden carrot, at will.

Boil till soft, and mash. *Dub. Ph.* 1850.

This acts merely as an emollient, and is not possessed of any virtues beyond those of the common poultice.

Extract of Carrot Root.

℞ Clarified juice of carrot root, at will.

Evaporate on a water-bath to the consistence of honey. *Swediaur.*

As an application to ulcerated cancers.

Carrot Ointment.

℞ Carrot root, grated, one pound.
Lard, twenty ounces.
Yellow wax, two ounces.

Heat them together till the water of vegetation is driven off, and the fat has acquired a yellow color; then strain for use.
W. Procter.

CARTHAMUS.

Safflower.

This is the florets of *Carthamus tinctorius*, a native of the Levant and Egypt, but cultivated in some parts of Europe and in the United States.

Sex. Syst. Syngen. æqual. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1162. Griffith, Med. Bot. 410.

The fruit was formerly much used in medicine, but is at present seldom resorted to. The florets are somewhat stimulant, and, in warm infusion, diaphoretic, and are used as a substitute for saffron.

Infusion of Safflower.

℞ Safflower, two drachms.
Boiling water, one pint.

Infuse, and strain.

Used in domestic practice in the exanthemata, to bring out the eruption.

CARUM.

Caraway.

Caraway fruit is the product of *Carum carui*, an umbelliferous plant, a native of Europe, and cultivated both there and in this country.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Linn. Sp. Pl. 378. Griffith, Med. Bot. 318.

The fruit, the only part used, is of a brownish color, with a fragrant but peculiar odor, and an aromatic, warm taste. It is a pleasant aromatic and carminative. Dose, in powder, from a scruple to a drachm.

Caraway Water.

℞ Caraway, bruised, one pound.
Water, twenty pounds.

Mix. Distil ten pounds. *Brit. Ph.*

Infusion of Caraway.

℞ Caraway, two drachms.
Boiling water, one pint.

Infuse and strain. *Wood.*

In flatulent colic of infants.

Spirit of Caraway.

℞ Bruised caraway, twenty-two ounces.
Proof spirit, one gallon.
Water, two pints.

Mix, and distil one gallon.
Lond. Ph. 1836.

℞ Oil of caraway, two fl. drachms.
Proof spirit, one gallon.

Dissolve. *Lond. Ph.* 1851.

As a carminative. In doses of one to two fl. drachms.

Oil of Caraway.

℞. Caraway, bruised, at will.
Water, sufficient.

Macerate for some time, distil, and separate the oil. *Van Mons.*

Essence of Caraway.

℞. Oil of caraway, one fl. ounce.
Rectified spirit, nine fl. ounces.

Mix with agitation. *Dub. Ph.* 1850.

Dose, about twenty drops.

Embrocation of Caraway.

℞. Oil of caraway,
" peppermint,
each, one scruple.
" olives, one ounce.
Wine of opium, half a fl. drachm.

Mix. As an embrocation on the abdomen of infants in colic. *Radius.*

CARYOPHYLLUS.

Cloves.

Cloves are the unexpanded flowers of *Caryophyllus aromaticus*, a small tree, a native of the Molucca Islands, and also cultivated in many other parts of the East Indies.

Sext. Syst. Icosand. monog. *Nat. Syst.* Myrtaceæ.

Linn. Sp. Pl. 735. Griffith, Med. Bot. 298.

Cloves are somewhat nail-shaped, of a brown color, with a strong fragrant smell, and a permanent, pungent, aromatic taste. They are highly stimulating, and are given as a carminative and excitant of the gastric functions, in the dose of five to ten grains, but are more used as an adjunct to various officinal compounds.

Infusion of Cloves.

℞. Bruised cloves, two drachms.
Boiling water, one pint.

Macerate for two hours in a covered vessel, and strain. *U. S. Ph.*

The infusion of *Brit. Ph.* represents in each ounce eleven grains of cloves.

Dose, from one to two fl. ounces.

Clove Water.

℞. Bruised cloves, one part.
Water, eight parts.

Digest for twelve hours, and distil twelve parts.

As a stimulant and carminative. *Cottereau.*

Spirit of Cloves.

℞. Bruised cloves, one part.
Alcohol, eight parts.

Macerate for some days, and distil eight parts. *Guibourt.*

Tincture of Cloves.

℞. Bruised cloves, one part.
Alcohol, five parts.

Macerate for ten days, express, and filter. *Paris Codex.*

Wine of Cloves.

℞. Bruised cloves,
" mace, each, one drachm.
Red wine, one pint.

Boil, and strain. As a fomentation. *Saunders.*

Oil of Cloves.

℞. Bruised cloves, at will.
Water, sufficient.

Macerate for some time, distil, return the product, and redistil several times, separate the oil, which sinks to the bottom. *Van Mons.*

Dose, two to six drops.

Aromatic Balsam of Cloves.

℞. Oil of cloves,
" nutmeg, each, one scruple.
Spirit of juniper berries,
two ounces.

Mix. As a stimulating friction. *Bories.*

Odontalgic Mixture.

℞. Oil of cloves, twelve drops.
Tincture of pimpinella,
Sulphuric ether, each,
two drachms.
Aromatic tincture, one drachm.

Mix. To be applied to the carious tooth. *Augustin.*

Clove Plaster.

℞. Yellow wax, twenty-two parts.
Suet, twenty-four parts.

Melt, and add

Powdered olibanum, sixteen parts.
" cloves, eight parts.
Oil of nutmeg, six parts.
" peppermint, one part.

Mix. *Van Mons.*

As an application to the stomach, or over a pained part.

Clove Cataplasm.

℞. Rye flour, six or eight spoonfuls.
Red wine, sufficient.

to make a cataplasm; add

Powdered cloves,
Grated nutmeg, each,
a teaspoonful.

Mix well. As an application to the stomach, to check nausea or pain.
Radius.

Clove Bag.

℞. Powdered cloves, two drachms.
" marjoram,
half an ounce.
" rosemary, one ounce.

Mix, and quilt between folds of linen, dip in Cologne water, and apply to the pit of the stomach, to check nausea. *Phœbus.*

CASCARILLA.

Cascarilla.

This is the bark of *Croton eleutheria*, a shrub found in several of the West India islands, and also, perhaps, derived from other species.

Sex. Syst. Monœc. monadelph. *Nat. Syst.* Euphorbiaceæ.

Bennett, Journ. Proc. Linn. Soc. Griffith, Med. Bot. 596.

In rolled fragments, whitish externally, and of a chocolate color within, of an aromatic odor, and a spicy, bitter taste. It is an aromatic tonic, and is useful in debilitated conditions of the stomach and bowels. Dose, in powder, from a scruple to half a drachm.

Compound Cascarilla Powder.

℞. Powdered cascarilla, ten grains.
" opium,
" ipecacuanha, each,
one grain.

Mix. To be taken every five hours in obstinate diarrhœa. *Radius.*

℞. Powdered cascarilla, one drachm.
" hartshorn,
" cuttlefish bone,
each, four drachms.
" amber, two drachms.

Mix. One drachm to be taken in a glass of sugar and water, at bedtime, against nocturnal pollutions. *Pierquin.*

Infusion of Cascarilla.

℞. Bruised cascarilla, one ounce.
Boiling water, ten ounces.

Macerate for one hour in a covered vessel, and strain. *Brit. Ph.*

℞. Powdered cascarilla,
one troyounce.
Water, sufficient

Obtain by displacement one pint. Or it may be prepared by maceration in boiling water. *U. S. Ph.*

Dose, one to two fl. ounces.

Alkaline Infusion of Cascarilla.

℞. Bruised cascarilla, three ounces.
Carbonate of potassium, two drachms.
Boiling water, sixteen fl. ounces.

Macerate for two hours, and filter. Dose, a spoonful, two or three times a day, as an antacid and tonic. *Palat. Ph.*

Extract of Cascarilla.

℞. Bruised cascarilla, one part.
Water, six parts.

Treat the cascarilla first with two-thirds, then with the remainder of the water, and evaporate. Dose, from ten grains to half a drachm. *Ph. Germ.*

Mixture of Extract of Cascarilla.

℞. Extract of cascarilla, one drachm.
White sugar, six drachms.
Oil of chamomile, twenty drops.
Tragacanth, half a drachm.
Wine of opium, twenty-five drops.
Cinnamon water, two fl. ounces.
Peppermint water, four fl. ounces.

Mix. A spoonful every hour in dysentery.
Augustin.

Tincture of Cascarilla.

℞. Bruised cascarilla,
two ounces and a half.
Proof spirit, sufficient.

Obtain by maceration, displacement, and expression one pint (twenty fl. ounces) of tincture. Dose, half to two fl. drachms.
Brit. Ph.

Ph. Germ. directs to macerate one part of cascarilla in five parts of alcohol (0.892).

Concentrated Tincture of Cascarilla.

℞. Cascarilla in powder, No. 60,
sixteen troyounces.
Alcohol, sufficient.

Obtain by slow displacement two pints. Dose, half to one fl. drachm.
Maryland Coll. Ph.

Compound Wine of Cascarilla.

℞. Powdered cascarilla, one ounce and a half.
Contused orange-peel, one ounce.
" cinnamon, two drachms.
White wine, twenty-seven fl. ounces.

Digest for twenty-four hours, and filter. As a stomachic and tonic, in doses of two ounces, four times a day. *Phœbus.*

CASSIA FISTULA.

Purging Cassia.

This is the fruit or pod of the *Cassia fistula*, a large tree, a native of Egypt, and many parts of Asia, and cultivated in most tropical regions.

Sex. Syst. Decand. monog. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 540. Griffith, Med. Bot. 253.

The pods are a foot or more in length, cylindrical, of a dark brown color, with two longitudinal furrows on one side, and one on the other. They are internally divided into numerous cells, each containing one seed enveloped in a soft pulp. This latter, which is the part used, has a faint nauseous smell, and a sweet, mucilaginous taste. It is laxative in doses of one or two drachms, and purgative in those of one or two ounces.

Pulp of Purging Cassia.

℞. Purging cassia, bruised, sufficient.

Pour boiling water on it to soften the pulp, strain, and evaporate to proper consistence. *U. S. Ph.* 1840.

Dose, one drachm.

Confection of Cassia.

℞. Cassia pulp, half a pound.
Manna, two ounces.
Tamarind pulp, one ounce.
Syrup of roses, eight fl. ounces.

Mix well, and evaporate to proper consistence. *Lond. Ph.* 1836.

Slightly laxative.

Mixture of Cassia Pulp.

℞. Pulp of cassia, one ounce.
Infusion of rhubarb, a drachm and a half.
Syrup of roses,
Manna, each, one ounce.

Mix well. A mill laxative. *Pierquin.*

CASSIA MARILANDIA.

American Senna.

This species is an indigenous perennial plant, with showy, bright yellow flowers, growing in moist places and on the banks of streams.

Sex. Syst. Decand. monog. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 541. Griffith, Med. Bot. 260.

The leaves, which are the officinal portion, are usually exposed for sale in small packages, like the other herbs put up by the Shakers. They have a faint, unpleasant odor, and a nauseous taste like senna, of which they possess all the qualities, but are not quite as active.

Infusion of American Senna.

℞. American senna, one ounce and a half.
Coriander seed, bruised, one drachm.
Boiling water, one pint.

Macerate in a covered vessel one hour, and strain. *Martin.*

Dose, a wineglassful.

CASTANEA.

Chestnut Leaves.

Castanea vesca is a large tree growing in many parts of the United States.

Sex. Syst. Monœcia Polyan. *Nat. Syst.* Cupuliferæ.

The leaves are officinal; they are four to eight inches long, oblong-lanceolate, acuminate, sinuate-serrate, smooth and green on both sides, without odor, but of an astringent taste. They should be collected in August or September. Given freely in the form of decoction or fluid extract, they have been found serviceable in hooping-cough, without producing constipation.

Decoction of Chestnut Leaves.

℞. Chestnut leaves, half a troyounce.
Water, sufficient.

Boil and strain to obtain one pint. To be taken *ad libitum.* *Unzicker.*

Fluid Extract of Chestnut Leaves.

℞. Chestnut leaves, cut, sixteen troyounces.
Glycerin, four fl. ounces.
Sugar, six troyounces.
Boiling water, sufficient.

Digest the leaves with water for twenty-four hours, express, and strain; repeat twice with sufficient water to cover the leaves,

mix the clear infusions, add the glycerin and sugar, and evaporate to one pint.
Maisch.

Dose, half to one teaspoonful or more, every two or three hours, according to the age of the patient and the severity of the paroxysms. *A. S. Gerhard.*

CASTANEA PUMILA.

Chinquapin.

A shrub or small tree, growing chiefly in the southern part of this country. The bark has been used as a tonic and antiperiodic, in the form of infusion, made from one ounce of the bark to a pint of water, and given in doses of a fluidounce or two.

CASTOREUM.

Castor.

Castor is a peculiar substance obtained from membranous follicles in the common beaver or *Castor fiber*, situated between the organs of generation and the anus. It is in the form of solid, unctuous masses, contained in small, wrinkled, brownish sacs. It has a strong, unpleasant smell, and a bitter, acrid taste. It is stimulant and antispasmodic, and has been much praised in the neuroses. In this country it is not much used. Dose, from ten to twenty grains.

Compound Powder of Castor.

℞ Castor, twelve grains.
Powdered cascarilla, one scruple.
Magnesia, one scruple and a half.

Mix, and divide into three powders.
Saunders.

℞ Castor,
Powdered valerian,
Sugar, } each, ten grains.

Mix, and divide into three doses. *Phœbus.*
As antispasmodics.

Bolus of Castor.

℞ Assafetida,
Valerian,
Castor,
Amber, } each, half an ounce.
Camphor, one scruple.
Syrup, sufficient.

Mix, and form boluses of ten grains each. Said to be efficacious in hysteria, neuralgia, and vertigo. *Foy.*

Castor Pills.

℞ Assafetida, one drachm.
Galbanum,
Myrrh, each, half a drachm.
Castor, fifteen grains.
Tincture of valerian, sufficient.

Beat together, and divide into seventy-two pills. Dose, three to eight, three times a day, in hysteria. *Phœbus.*

Pills of Castor and Succinic Acid.

℞ Castor, one drachm.
Succinic acid, half a drachm.
Extract of gentian, sufficient.

Beat together, and form twenty-four pills. Three, morning and night, in hysteria.
Ellis.

Tincture of Castor.

℞ Bruised castor, two troyounces.
Alcohol, two pints.

Digest for seven days, express, and filter.
U. S. Ph.

Dose, from thirty drops to two fl. drachms.

Tincture of *Brit. Ph.* is about one-fourth weaker. *Paris Codex* and *Ph. Germ.* use proportions of one to ten; the latter recognizes two tinctures made with Canadian and with Siberian castor.

Ethereal Tincture of Castor.

℞ Powdered castor, one part.
Spirit of ether, ten parts.

Macerate for ten days and filter.
Paris Codex.

℞ Bruised castor, two ounces.
" saffron, one ounce.
Spirit of sulphuric ether, twelve ounces.

Digest for twenty-four hours, and filter. As an antispasmodic. In doses of thirty drops.
Spielmann.

Ammoniated Tincture of Castor.

℞ Bruised castor, two ounces and a half.
Contused assafetida, ten drachms.
Spirit of ammonia, two pints.

Digest for seven days, in a closed vessel, express, strain, and filter. *Ed. Ph.* 1841.

A powerful stimulant, and antispasmodic, in cases of spasm of the stomach, hysteria, etc. Dose, thirty drops to two fl. drachms.

Compound Tincture of Castor.

℞. Assafetida, two drachms.
Opium, half a drachm.
Oil of amber, one drachm.
Castor, half an ounce.
Alcohol, four ounces.

Digest for four days, express, and filter. Dose, thirty to forty drops in wine, in hysteria. *Ferrara Ph.*

Compound Plaster of Castor.

℞. Wax plaster, sixteen ounces.
Soap, four ounces.

Melt together, and add, on cooling,

Camphor, one ounce.
Castor, half an ounce.

Incorporate well. Highly praised in headache, rheumatism, etc. *Giordano.*

Compound Spirit of Castor.

℞. Castor, half an ounce.
Assafetida, two drachms.
Oil of amber, one drachm.
" savine,
" rue, each, half a drachm.
Alcohol, ten ounces.

Digest, distil, and add

Empyreumat. carb. of ammonium, two ounces.
Camphor, one drachm.

Distil again. Dose, twenty to forty drops. *Cottereau.*

CATALPA.

Catalpa.

The *Catalpa cordifolia* is a beautiful native tree, principally found in the southern and southwestern States.

Sex. Syst. Diand. monog. *Nat. Syst.* Bignoniaceæ.

Elliot, Bot. i. 24. Lindley, Flor. Med. 499.

The bark is said to be vermifuge, but the part used in medicine is principally the pods. These have been found efficacious in asthma.

Decoction of Catalpa Pods.

℞. Catalpa pods, half an ounce.
Water, sufficient

to obtain eight ounces of decoction; add

Oxymel of squill, half an ounce.

℞. Catalpa pods, half an ounce.
Seneka, two drachms.
Water, sufficient

to obtain eight ounces of decoction; add

Oxymel of squill, one ounce.

In spoonful doses, in chronic, nervous asthma. *Brera.*

℞. Catalpa pods, three or four.
Water, twelve fl. ounces.

Boil down to six ounces, to be given in two doses, morning and night. *Antomachi.*

CATARIA.

Catnep.

This is the leaves or whole herb of *Nepeta cataria*, a perennial herbaceous plant, a native of Europe, and naturalized in the United States.

Sex. Syst. Didynam. gymnos. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 797. Griffith, Med. Bot. 512.

It has a peculiar, somewhat unpleasant odor, and a bitterish, aromatic taste. It is stimulant, carminative, etc., and is used in the flatulent colic of infants, and as an emmenagogue, etc.

Infusion of Catnep.

℞. Catnep, two drachms.
Boiling water, eight fl. ounces.

Infuse in a covered vessel. Dose, a teaspoonful occasionally, whilst hot, for an infant in flatulent colic; to be taken freely, as a diaphoretic, or emmenagogue.

CATECHU.

Catechu.

Catechu is an extract procured from the wood of *Acacia catechu*, and also from other trees. The *Acacia catechu* is a native of the East Indies, and is now cultivated in some of the West India islands.

Sex. Syst. Polygam. moncec. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 409. Griffith, Med. Bot. 268.

Catechu comes in masses of various forms, of a rusty-brown color externally, but paler within. It is inodorous, but has a bitter and astringent taste, followed by a sensation of sweetness. It principally consists of tannin and extractive. It is a tonic and astringent, and is used in cases where astringents are required. The dose is from ten grains to half a drachm, repeated as required.

CATECHU PALLIDUM.

Pale Catechu.—Gambir.

This, which is the only variety recognized by the British Pharmacopœia, is the product of *Uncaria Gambir*, a high-climbing shrub of the West India Islands.

Syst. Cinchonaceæ.
Roxb. Flor. Ind.
It comes in cubes, about an inch in diameter, externally brown, internally yellowish or reddish-gray. In odor, taste, and properties, it closely resembles catechu.

Compound Powder of Catechu.

℞ Powdered catechu, fifteen grains.
" salts, two grains.

Mix, and make powder; to be taken after each liquid stool, in diarrhœa from a weakened condition of the bowels.
A. T. Thomson.

℞ Pale catechu, four ounces.
Kino,
Rhatany root, each, two ounces.
Cinnamon,
Nutmeg, each, one ounce.

Mix the substances in powder and pass through a five sieve.
An aromatic astringent. Dose, fifteen to forty grains. *Brit. Ph.*

℞ Powdered catechu,
" cascarilla,
" gum Arabic, } equal parts.
Aromatic powder,

Mix. Dose, a scruple every two hours, in chronic diarrhœa. *Augustin.*

Bolus of Catechu.

℞ Powdered catechu, twenty-four grs.
Extract of opium, two grains.
Conserve of roses, sufficient.

Mix, and form two boluses, one to be taken morning and evening, in chronic diarrhœa.
Foy.

Pills of Alum and Catechu.

℞ Alum, six grains.
Extract of opium,
Catechu, each, one grain.

Mix, and divide into six pills, one to be given every two to four hours. In passive hemorrhage and atonic mucous discharges.
Ellis.

Compound Catechu Bolus.

℞ Powdered catechu, one scruple.
Confection of opium, twelve grains.
Aromatic confection, sufficient.

Make a bolus, to be taken twice a day, in inordinate flow of the menses. *Babington.*

℞ Powdered catechu, twelve parts.
" alum, six parts.
" opium, two parts.
Syrup of red roses, sufficient.

Form a mass, and divide into pills of six grains each. One or two a day, in the decline of gonorrhœa. *Foy.*

Pills of Catechu and Liquorice.

℞ Catechu, half a drachm.
Gum Arabic,
Extract of liquorice,
each, two drachms.
Mastich, one drachm.
Syrup of mallows, sufficient.

Form mass, and divide into pills of three grains each. Four, three times a day, in chronic catarrh. *Van Mons.*

Lozenges of Catechu.

℞ Catechu, one part.
Sugar, five parts.

Mix, and with mucilage of tragacanth form lozenges of eight grains each.
Paris Codex.

℞ Pale catechu, seven hundred and twenty grains.
Refined sugar, twenty-five ounces.
Gum acacia, one ounce.
Mucilage of gum acacia, two fl. ounces.

Mix the solid ingredients in powder, add the mucilage, and then sufficient water to form a mass, which is to be divided into seven hundred and twenty lozenges. Dose, one to six. *Brit. Ph.*

Electuary of Catechu.

℞ Catechu,
Kino, each, four ounces.
Cinnamon,
Nutmeg, each, one ounce.
Opium, diffused in a little sherry wine, one drachm and a half.
Syrup of red roses, reduced to the consistence of honey, one pint and a half.

Pulverize the solids, mix the opium and syrup, add the powders, and beat into a mass. *Ed. Ph.* 1841.
In diarrhœa and chronic dysentery, in doses of half a drachm to a drachm.

℞ Catechu,
Balsam of tolu, each, one drachm.
Peruvian bark, one ounce.
Syrup of red roses, sufficient.

Beat together. One drachm morning and evening, in leucorrhœa and gonorrhœa.
Brera.

Compound Infusion of Catechu.

℞. Catechu, half a troyounce.
Cinnamon, powdered, one drachm.
Boiling water, one pint.

Digest for an hour, and strain. *U. S. Ph.*

Infusion of Catechu, Brit. Ph., is of nearly two-thirds this strength.

Infusion of Catechu.

℞. Powdered catechu, one part.
Boiling water, one hundred parts.

Macerate and strain. *Dorvault.*

Dose from one to three fl. drachms, three or four times a day.

Tincture of Catechu.

℞. Powdered catechu, three troy-ounces.
" cinnamon, two troy-ounces.
Diluted alcohol, sufficient.

Mix powders, and by displacement obtain two pints of tincture. *U. S. Ph.*

℞. Pale catechu, two ounces and a half (avoir.).
Cinnamon, bruised, one ounce (avoir.).
Proof spirit, one pint (imper.).

Macerate for a week, press, filter, and add proof spirit to make one pint. *Brit. Ph.*

℞. Bruised catechu, one part.
Alcohol of 60 per cent. five parts.

Macerate for eight days, and filter.
Paris Codex and *Ph. Germ.*

A pleasant astringent. Dose, thirty drops to three fl. drachms.

Catechu Collutory.

℞. Catechu,
Myrrh, each, eight parts.
Balsam of Peru, one part.
Spirit of cochlearia,
Alcohol, each, twenty-four parts.

Mix and digest for four days, and filter. As a mouth-wash, in a spongy condition of the gums. *Saunders.*

Mixture of Catechu and Logwood.

℞. Extract of logwood, three drachms.
Tincture of catechu, two fl. drachms.
Water, seven fl. ounces.

Mix. Two tablespoonfuls, every three or four hours, in chronic stages of diarrhœa and dysentery. *Ellis.*

Anti-Emetic Mixture.

℞. Catechu, one drachm.
Columbo, thirty grains.
Canella, twenty grains.
Boiling water, four fl. ounces.

Mix, and digest for eight hours, strain, and add

Syrup of red roses, one fl. ounce.

In spoonful doses. *Pierquin.*

Injection of Catechu.

℞. Catechu,
Myrrh, each, one drachm.

Dissolve in

Lime water, four fl. ounces,

and strain. As an injection, in chronic leucorrhœa and gonorrhœa.

Aromatic Pastilles of Catechu. (Cachou Aromatise.)

℞. Extract of liquorice,
Water, each, three ounces and a half.

Dissolve on a water-bath, and add

Powdered catechu, four hundred and sixty-two grains.
" gum Arabic, two hundred and thirty-one grains.

Evaporate to the consistence of an extract, and incorporate

Powdered mastich,
" cascarilla,
" charcoal,
" orris root,
each, thirty grains.

Reduce to proper consistence, remove from fire, and add

Oil of peppermint, thirty drops.
Tincture of ambergris,
" musk, each, ten drops.

Mix, and form into one grain pills. Used to aromatize the breath. *Gray.*

CEANOTHUS.

New Jersey Tea.

Several species of Ceanothus have medical properties, but the only one in use in this country is the *C. Americanus*, a suffruticose plant, found in most parts of the United States.

Sex. Syst. Pentand. trigyn. *Nat. Syst.* Rhamnaceæ.

Linn. Sp. Pl. 284. Griffith, Med. Bot. 218.

The leaves and root are bitter and astringent, but the root is the most active. They have been used in a variety of cases, to which astringents are applicable.

Decoction of New Jersey Tea.

℞. New Jersey tea root, two drachms.
Water, one pint.

Boil for a quarter of an hour, and strain. Said by Ferrein to be efficacious in gonorrhœa and syphilis; and by Dr. Hubbard, in dysentery; and also as a gargle in aphthous sore mouth, and in ulcerations of the fauces.

CENTAUREA BENEDICTA.

Blessed Thistle.

An annual plant, native of the south of Europe, and become naturalized in some parts of the United States.

Sex. Syst. Syngen. frust. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1296. Griffith, Med. Bot. (*Cnicus*) 409.

The whole herb is used; it has a faint nauseous odor, and a very bitter taste. It is used as a tonic, diaphoretic, or emetic. Dose of powder, as tonic, a scruple to a drachm.

Infusion of Blessed Thistle.

℞. Blessed thistle, two drachms and a half.
Boiling water, one quart.

Infuse for half an hour, and strain. As a diaphoretic. *Paris Codex.*

℞. Blessed thistle, half an ounce.
Cold water, one pint.

Infuse, and strain. As a tonic, in the dose of two fl. ounces. *Wood.*

Wine of Blessed Thistle.

℞. Blessed thistle, one ounce and a half.
Columbo, three drachms.
Cinnamon, two drachms.
Wine, two pints.

Macerate for twenty-four hours, and strain. Dose, one to four spoonfuls in the morning, as a stomachic. *Wirtemberg Ph.*

CENTAURIUM.

Centaury.

The herbs or flowering heads of *Erythræa centaurium*, a small annual plant, indigenous to many parts of Europe.

Sex. Syst. Pentand. monog. *Nat. Syst.* Gentianaceæ.

Linn. (*Chironia*) Sp. Pl. 332. Griffith, Med. Bot. 459.

This plant is very bitter, and is analogous in its properties to gentian. In this country, its use has been superseded by the American centaury or sabbatia. Dose of the powder, from thirty grains to a drachm.

Portland Powder.

℞. Centaury,
Germander,
Gentian,
Round aristolochia,
Ground pine, } equal parts.

Powder, and mix. Once highly celebrated in the cure of gout. Dose, one drachm.

Bitter Species.

℞. Germander,
Centaury,
Blessed thistle, } equal parts.

Used in form of infusion. *Paris Codex.*

Extract of Centaury.

℞. Centaury, one part.
Hot water, eight parts.

Macerate in one-half the water, express, and strain; repeat the process with the remainder of the water, unite the liquids, and evaporate. *Paris Codex* and *Ph. Germ.*

Pills of Extract of Centaury.

℞. Extract of centaury, one drachm.
Myrrh, two drachms.
Balsam of Peru, one scruple.

Mix, and form into pills of three grains. Four, three times a day, as a tonic and stomachic. *St. Marie.*

Compound Wine of Centaury.

℞. Centaury,
Apocynum,
Madder, } each, one ounce.
White wine,
Water, each, a pint and a half.

Boil down to two-thirds, and add to the strained liquid

Syrup of orange peel, two ounces.

A cupful morning and evening, in jaundice. *Béral.*

Mixture of Extract of Centaury.

℞. Extract of centaury, one drachm.
Bitter almonds, two drachms.
Chamomile water, two ounces.

Rub well together, and strain. As a febrifuge. *Foy.*

CERA.

Wax.

Cera Flava, or yellow wax, is a concrete substance, deposited by the honey bee, Apis mellifica.

Cera Alba, or white wax, is prepared from the yellow, by melting it, pouring into thin layers, wetting and turning frequently, and exposing to the air and light on frames.

Many plants yield a concrete principle called vegetable wax, which corresponds in many particulars with that of the bee.

Wax is much employed in pharmacy in the formation of cerates and plasters. It has also been used as a medicine, in the dose of a teaspoonful.

Waxed Cloth.

℞. White wax, eight parts.
Olive oil, four parts.
Turpentine, one part.

Melt together, and spread upon linen or muslin stretched in a frame. Used for making blistering cloth, and vesicating taffetas.

Wax Plaster.

℞. Yellow wax,
Suet, each, three pounds.
Resin, one pound.

Melt with a moderate heat, and stir till cold. Used to promote discharges from blistered surfaces. *Lond. Ph.* 1836.

Rose Lip Salve.

℞. Oil of almonds, ninety parts.
Alkanet root, four parts.

Digest until sufficiently colored and add

White wax, sixty parts.
Spermaceti, ten parts.

Melt together, and flavor with

Oil of Bergamot,
Oil of lemon, each, one part.
Ph. Germ.

℞. White wax, one ounce.
Oil of almonds, two ounces.

Melt and add

Carmine,
Otto of roses, each, five grains.
Paris Codex.

Simple Cerate.

℞. Lard, eight troyounces.
White wax, four ounces.

Melt together, and stir constantly till cool. *U. S. Ph.*

℞. White wax, one part.
Oil of almonds, three parts.

Melt together, and stir till cold. *Paris Codex.*

℞. Olive oil, five parts.
Yellow wax, two parts.

Melt together, and stir till cold. *Ph. Germ.*

Galen's Cerate.

℞. White wax, one part.
Oil of almonds, three parts.
Rose water, three parts.

Heat the wax, oil, and one-half of the water until the wax has melted, pour into a warm marble mortar, and stir continually until the mixture has nearly cooled; then add the remainder of the water gradually, triturating, and beating until the whole is thoroughly mixed. *Paris Codex.*

Simple Ointment.

℞. Lard, eight troyounces.
Yellow wax, two troyounces.

Melt the wax, add the lard gradually, and stir while cooling. *U. S. Ph.*

℞. White wax, two ounces.
Prepared lard, three ounces.
Almond oil, three fl. ounces.

Melt and mix. *Brit. Ph.*

CERIUM.

Cerium.

CERII OXALAS.

Oxalate of Cerium.

It is obtained by precipitating a solution of nitrate or of chloride of cerium by a solution of oxalate of ammonium.

A white powder, insoluble in water, alcohol, and ether, and almost tasteless. It is regarded as a sedative and tonic, and has been used in vomiting from various causes, particularly in the vomiting of pregnancy and uterine irritation. Dose, gr. j. to iii., thrice daily, in the form of powder or pill. *Simpson.*

Pills of Oxalate of Cerium.

℞. Oxalate of cerium,
Extract of hops,
each, twenty-four grains.

Mix and form twelve pills.
Waring-Curran.

CETACEUM.

Spermaceti.

A peculiar concrete substance, obtained from the head of *Physeter macrocephalus*, or spermaceti whale. It is white, semi-transparent, friable, soft, somewhat oily to the touch, insipid, but with a faint odor. It has been used as a demulcent, and also enters into the composition of several ointments and cerates.

Compound Powder of Spermaceti.

℞. Spermaceti, two drachms.
Nitrate of potassium, one drachm.
Orris root,
Sugar, each, one ounce.

Powder well, and mix. A teaspoonful, three or four times a day, in catarrh.
Radius.

Saccharated Spermaceti.

℞. Spermaceti, one part.
White sugar, three parts.

Rub into a very fine powder. *Ph. Germ.*

Spermaceti Mixture.

℞. Spermaceti, two drachms.
Sugar, three drachms.
Paregoric elixir, half fl. ounce.
Water, eight fl. ounces.

Rub spermaceti and sugar together with the yolk of an egg; add the water and paregoric gradually. A tablespoonful, several times a day. In catarrh. *Ellis.*

℞. Spermaceti, half an ounce.
Gum Arabic, two drachms.
Syrup, half an ounce.
Water of bitter almonds, one drachm.
Water, two ounces and a half.

Rub together, and strain. A dessertspoonful every two hours. In catarrh. *Phœbus.*

℞. Spermaceti, two drachms.
Olive oil, one drachm.
Powdered gum Arabic, half an ounce.
Water, four fl. ounces.

Triturate the spermaceti with the oil, until reduced to a paste, then add the gum, and lastly the water, gradually. *W. Procter.*

℞. Spermaceti, two drachms.
Yolk of egg, one.
Powdered gum Arabic, two drachms.
Paregoric elixir, six fl. drachms.
Antimonial wine, four fl. drachms.
White sugar, three drachms.
Water, six fl. ounces.

Mix. Rub the spermaceti with the yolk of egg, then add the other ingredients separately; when well incorporated, introduce the water gradually. A tablespoonful every two or three hours to an adult. Useful in catarrh, especially of measles. *Dewees.*

Spermaceti Ointment.

℞. Spermaceti, five ounces.
White wax, two ounces.
Almond oil, twenty fl. ounces.

Melt together with a gentle heat, and stir constantly until cool. *Brit. Ph.*

Mild dressing for open surfaces.

Ointment of Spermaceti and Rose Water.

℞. Rose water, one fl. ounce.
Oil of almonds, two fl. ounces.
Spermaceti, half an ounce.
White wax, one drachm.

Melt together, by a water-bath, the oil, spermaceti and wax; add rose water, and stir till cold. *U. S. Ph.*

A pleasant and cooling application to irritable surfaces, well known as *cold cream.*

Cold Cream without Spermaceti.

℞. White wax, one ounce.
Oil of almonds, four fl. ounces.
Rose water, two fl. ounces.
Borax, half a drachm.
Oil of roses, five minims.

Dissolve the wax in the oil of almonds, by a gentle heat, also dissolve the borax in the rose water, and add the solution to the heated mixture, stirring till cold, then add the oil of roses. *Turnbull.*

Spermaceti Cerate.

℞. Spermaceti, one troyounce.
White wax, three troyounces.
Olive oil, five troyounces.

Melt wax and spermaceti together, then add the oil previously heated, and stir till cold. *U. S. Ph.*

℞ Spermaceti,
White wax, each, two parts.
Oil of almonds, three parts.

Melt together as above. *Ph. Germ.*

An excellent dressing for blisters, wounds, etc.

Spermaceti Lip Salve.

℞ Spermaceti,
White wax, each, half an ounce.

Melt, and add

Oil of almonds, one ounce.
" lavender, twenty drops.
" bergamot, ten drops.
" cloves, two drops.

Rub well together. *Niemann.*

℞ Spermaceti, one ounce and a half.
White wax, nine drachms.
Oil of almonds, twelve ounces.
Alkanet root, two ounces.
Otto of roses, one drachm.

Digest the first four ingredients in the heat of a water-bath for four hours, strain, and add the otto of roses. *Gray.*

Spermaceti Liniment.

℞ Spermaceti,
White wax, each, half a drachm.
Oil of almonds, one ounce.
White lead,
Litharge, each, twenty grains.
Gum lac, sufficient.

Mix. As a cosmetic, but the presence of the lead requires it to be used with caution. *Pierquin.*

Sultana Ointment.

℞ Spermaceti, eight parts.
Butter of cacao, sixteen parts.
Oil of almonds, thirty-two parts.
Balsam of Peru, one part.

Melt together, and add

Orange-flower water, one part.

Stir constantly till cold. *Niemann.*

℞ Spermaceti,
White wax, each, one drachm and a half.
Oil of almonds, three ounces.

Melt together, and add

Rose water, two ounces.
Tincture of benzoin, thirty drops.

Mix well. *Taddei.*

CETRARIA.

Iceland Moss.

This is a lichen found in great abundance in the northern regions of both continents.

Sex. Syst. Cryptog. lichen. *Nat. Syst.* Lichenaceæ.

When dried it is inodorous, but has a bitter, mucilaginous taste. It is demulcent, tonic, and nutritious, and is useful in pulmonary and other complaints, in which the local disease is attended with a debility of the digestive organs, or of the general system. Dose of the powder, thirty grains to a drachm.

Decoction of Iceland Moss.

℞ Iceland moss, half an ounce.
Water, sufficient.

Boil with a pint of water, for fifteen minutes, express, strain, and add sufficient water to make a pint. *U. S. Ph.*

Brit. Ph. directs to obtain twenty fl. ounces from one ounce of Iceland moss.

To be taken during the twenty-four hours.

Iceland Moss deprived of Bitterness.

℞ Iceland moss, five parts.
Tepid water, thirty parts.
Liquid carbonate of potassium, one part.

Macerate for three hours, strain, wash the residue well, and dry. *Ph. Germ.*

This is merely a mucilaginous demulcent.

Dry Iceland Moss Jelly.
Saccharated Iceland Moss Powder.

℞ Cut Iceland moss, sixteen parts.
Carbonate of potassium, one part.

Macerate with water, sufficient to cover the Iceland moss, for twenty-four hours, express, and wash the residue with cold water until deprived of bitter taste; then add

Water, two hundred parts.

Boil for four hours and strain. Repeat the boiling with a fresh portion of water, and add to the strained liquid

Sugar, six parts.

Evaporate, dry in thin layers, add sufficient sugar to make its weight equal to one-half of the preparation, and rub it into powder. *Ph. Germ.*

Sweet Iceland Moss Jelly.

R. Saccharated Iceland moss powder,
Sugar, each, two ounces.
Water, four ounces.

Boil, remove the scum, and, while cooling, add

Orange-flower water, two drachms.

This will make seven ounces of jelly.
Paris Codex.

Bitter Iceland Moss Jelly.

R. Iceland moss, three parts.
Water, one hundred parts.

Wash the Iceland moss with cold water; then boil with the water for half an hour, express, strain, and add

Sugar, three parts.

Evaporate with continual agitation to ten parts, and cool. *Ph. Germ.*

Iceland Moss Mixture.

R. Iceland moss, two ounces.
Hartshorn shavings, one ounce.
Water, one quart.

Boil down to a pint, strain, and add

Wine of opium, fifteen drops.

In phthisis, to be taken during the day.
Brera.

R. Iceland moss, two drachms.
Powdered salep, ten grains.
" cinnamon, eight grains.
Water, twelve fl. ounces.

Boil to six ounces, and add

Syrup, sufficient.

Said to be useful in phthisis, leucorrhœa, and hooping-cough, in doses of four ounces, three or four times a day. *Augustin.*

R. Decoction of Iceland moss, seven fl. ounces and a half.
Diluted sulphuric acid, one fl. drachm.
Syrup, four fl. drachms.
Laudanum, fifty drops.

Mix. A wineglassful three times a day, in phthisis. *A. T. Thomson.*

Iceland Moss Chocolate.

Simple chocolate, ten parts.
Saccharated Iceland moss powder, one part.

Triturate together with the aid of heat, and form into cakes. *Paris Codex.*

Iceland Moss Troches.

R. Saccharated Iceland moss powder, ten parts.
Powdered sugar, twenty parts.
" gum Arabic, one part.

Form a mass with sufficient water, and divide into lozenges of fifteen grains each.
Paris Codex.

Cetrarine.

R. Iceland moss, in coarse powder, one pound.
Alcohol (.883), four pounds.

Boil for half an hour, permit to cool, till no vapors are given off, express, and add to the fluid

Muriatic acid, three drachms,

and four times its bulk of distilled water. Let rest for a night in a closed matrass; then decant, throw deposit on filter, and press; while still moist, wash with alcohol or ether; then treat with boiling alcohol, filter, and permit cetrarine to precipitate.
Herberger.

Powder of Cetrarine.

R. Cetrarine,
Gum Arabic, each, two grains.
White sugar, half a scruple.

Useful in intermittent fevers, in doses of eight grains every two hours during the apyrexia. *Muller.*

CHELIDONIUM.

Celandine.

The herb of *Chelidonium majus*, a perennial herbaceous plant, native of Europe, but generally naturalized in this country.

Sex. Syst. Polyand. polyg. *Nat. Syst.* Papaveraceæ.

Linn. Sp. Pl. 723. Griffith, Med. Bot. 130.

Exudes, when broken, an orange-colored, fetid juice. Its taste is extremely bitter and acrid, leaving a burning sensation. The root is the most powerful. It has been used as a drastic hydragogue, and also in scrofula, etc. The dose of the dried root is half a drachm to a drachm; of the fresh juice, thirty to forty drops.

Extract of Celandine.

R. Juice of celandine, at will.

Boil so as to coagulate; strain, evaporate to one-third, cool, filter, and evaporate.
Paris Codex.

R. Fresh flowering celandine, twenty parts.

Bruise in a stone mortar, adding one part of water, express, add to residue three parts of water, and again express. Evaporate the mixed liquid at or below 175° to two parts, add two parts of alcohol, strain, and evaporate. *Ph. Germ.*

Dose, five to fifteen grains, as a hydragogue purgative.

Pills of Celandine.

℞. Extract of celandine,
Ammoniac, each, one drachm and a half.
Soap, one drachm.

Mix, and form pills of four grains. Two or three a day, in engorgements of the viscera, especially of the spleen. *Schubarth.*

Extract of Celandine Mixture.

℞. Extract of celandine, two drachms and a half.
" henbane, one scruple.
Sulphate of potassium, one ounce.
Tartar emetic, one grain.
Elder water, six fl. ounces.
Oxymel of squill, one fl. ounce.

Mix. A dessertspoonful every two hours, as a hydragogue. *Augustin.*

CHENOPODIUM.

Wormseed.

This is the fruit of *Chenopodium anthelminticum*, a native plant, found in most parts of the country.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Chenopodiaceæ.

Linn. Sp. Pl. 320. Griffith, Med. Bot. 537.

The fruit is in small grains, of a greenish-yellow color, with a bitterish, aromatic, pungent taste, and a nauseous peculiar smell. Besides the fruit, the expressed juice of the whole plant is used, and the essential oil. They are all efficient anthelmintics. The first are given in the form of an electuary; the second in tablespoonful doses; the oil is given in the dose of five to ten drops to a child three years old.

Decoction of Wormseed.

℞. Fresh leaves of wormseed, one ounce.
New milk, one pint.
Orange-peel, two drachms.

Boil, and strain. Dose, a wineglassful twice a day.

Oil of Wormseed.

℞. Bruised wormseed, at will.
Water, sufficient to cover the fruit; infuse for some hours, distil, and separate the oil. More commonly, however, the whole herbaceous portion is subjected to distillation.

Dose, from four to eight drops for a child, night and morning, for three or four days, to be followed by a cathartic. *Coxe.*

Wormseed Oil Mixture.

℞. Oil of wormseed, one drachm.
Sugar,
Gum Arabic, each, one drachm and a half.

Mix, and add

Mint water, two and a half fl. ounces.

A teaspoonful, four times a day for two days, to a child, to be followed by a purge. *Ellis.*

℞. Oil of wormseed, one fl. drachm and a half.
Castor oil, three fl. ounces.
Oil of anise, ten drops.

Mix, and add

Syrup of rhubarb, or
" of senna, one fl. ounce.

Mix. Dose, a teaspoonful night and morning, to a child two years old. *Am. Journ. Ph.*

CHIMAPHILA.

Pipsissewa.

The leaves of *Chimaphila umbellata*, an evergreen plant, found in the northern portions of both continents.

Sex. Syst. Decand. monog. *Nat. Syst.* Pyrolaceæ.

Linn. (*Pyrola*) Sp. Pl. 568. Griffith, Med. Bot. 421.

Pipsissewa has a peculiar and rather pleasant odor, especially when fresh, and an astringent, bitter, and somewhat sweetish taste. It is tonic, diuretic, and astringent, and has been much used in nephritic complaints, dropsy, etc.

Decoction of Pipsissewa.

℞. Pipsissewa, one ounce.
Water, sufficient.

Boil for fifteen minutes, so as to obtain one pint, and strain. *U. S. Ph.*

To be taken during the day, in dropsy and chronic affections of urinary organs.

Alkaline Decoction of Pipsissewa.

℞. Decoction of pipsissewa, one pint.
Solution of carbonate of potassium, two drachms.

Mix. Four tablespoonfuls, three times a day, in same cases as above. *Foy.*

Compound Decoction of Pipsissewa.

℞. Pipsissewa, half an ounce to one ounce.
Water, twelve fl. ounces.

Boil to six ounces, and add

Gin, two ounces.

Let stand for two hours, and strain. Two tablespoonfuls four times a day, in dropsy. *Radius.*

℞. Pipsissewa, six drachms.
Water, twelve ounces.

Boil to six ounces, and add at close

Senna, two drachms.

Strain. A tablespoonful every two hours as a diuretic. *Radius.*

Fluid Extract of Pipsissewa.

℞. Pipsissewa, in powder, No. 50, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Mix the liquids, moisten the powder with one-half of the mixture, pack in a glass percolator, add the other half, and macerate for four days; then with diluted alcohol displace twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, a teaspoonful.

Extract of Pipsissewa.

℞. Pipsissewa, one pound.
Water, one gallon.

Macerate for twenty-four hours, boil down to two pints, strain, and evaporate to proper consistence. Dose, ten to thirty grains.

Pipsissewa Pills.

℞. Extract of pipsissewa,
Resin of guaiacum, each, one drachm and a half.
Precipitated sulph. of antimony, twelve grains.

Beat together, and make pills of two grains. Dose, five, twice a day, in arthritic affections.

Pipsissewa Syrup.

℞. Powdered pipsissewa, four ounces.
Water, eight fl. ounces.

Macerate for thirty-six hours, percolate so as to obtain a pint of fluid, evaporate one-half, and add

Sugar, twelve ounces.

One to two tablespoonfuls at a time. *W. Procter.*

Pipsissewa Beer.

℞. Pipsissewa, half a pound.
Water, one gallon.

Boil, strain, and add

Brown sugar, one pound.
Powdered ginger, half an ounce.
Yeast, sufficient

to produce fermentation. When this has taken place, keep in well-stopped bottles. Dose, a half-tumblerful, three or four times a day. In strumous affections, especially of the joints. *Dr. I. Parrish.*

CHIRETTA.

Chiretta.

This is the herb and root of *Agathotes chirayta* (*Ophelia chirata*), a native of the northern mountainous parts of India.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Gentianaceæ.

Don, Phil. Mag., 1836. Griffith, Med. Bot. 462.

The whole plant is bitter, and the root most so; it is inodorous. It appears to have the same properties as gentian, and is applicable to the same cases. Dose, of powder, is twenty grains.

Infusion of Chiretta.

℞. Chiretta, a quarter of an ounce.
Distilled water at 120°, ten ounces.

Infuse for half an hour, and strain. *Brit. Ph.*

Dose, one to two fl. ounces as a simple tonic bitter.

Tincture of Chiretta.

℞. Chiretta, cut small and bruised, two ounces and a half.
Proof spirit, sufficient.

Obtain by maceration, percolation, and expression one pint (twenty fl. ounces) of filtered tincture. Dose, half to two fl. drachms. *Brit. Ph.*

Fluid Extract of Chiretta.

℞. Chiretta in powder, No. 50, sixteen troyounces.
Alcohol of 60 pr. ct., sufficient.

Macerate the powder for four days with one pint of the alcohol, displace slowly twenty-four fl. ounces reserving the first fourteen, evaporate the remainder to two fl. ounces and mix with reserved portion. Dose, ten to thirty minims.

CHLORAL.

Chloral Hydrate.

It is prepared by passing for several days dry chlorine gas through absolute or stronger alcohol, until hydrochloric acid ceases to be produced; the mass is then treated with strong sulphuric acid, the oily layer which separates is distilled over a little lime, and the distillate is combined with the requisite quantity of water, and allowed to congeal, or else crystallized by fusion and slow refrigeration, or from one of its solvents.

It occurs in white crystalline masses, or in colorless transparent crystals, having a pungent aromatic odor and taste, readily dissolving in water and alcohol, affording clear solutions. It is likewise soluble in ether, petroleum-benzin, and sulphide of carbon. It fuses at about 135° F., and boils at about 207° F., evaporating without leaving any residue, and in the open air without combustion. Its aqueous solution faintly reddens blue litmus paper, and when acidulated with nitric acid, is not precipitated by nitrate of silver. Strong sulphuric acid separates oily chloral, but does not acquire a dark coloration.

As a hypnotic and anæsthetic, it has been used in a variety of diseases in doses of thirty to forty grains. It is given in aqueous solution flavored with some aromatic syrup.

CHLORINIUM.

Chlorine.

This is an elementary, gaseous fluid, of a greenish-yellow color, and a peculiar, penetrating smell. It has been used as an inhalation in a diluted state, in diseases of the lungs, and also as a fumigation in diseases of the liver, etc., and also as a disinfectant. The strong fumigation of the *Ph. Germ.* is chlorine gas, generated in the usual manner; for the *weak chlorine fumigation* chlorinated lime is mixed with water and vinegar added.

Chlorine.

℞ Peroxide of manganese, one part.
Common salt, three parts.
Sulphuric acid,
Water, each, two parts.

Mix the acid and water, pour on the other substances in powder, and collect the gas under a receiver. *Paris Codex.*

Chlorine Water.

℞ Chloride of sodium, one drachm.
Sulphuric acid, two fl. drachms.
Red oxide of lead, three hundred and fifty grains.
Water, eight fl. ounces.

Rub the salt and oxide of lead together, put them into the water, add the acid, and agitate occasionally till the red oxide becomes almost white. Allow the insoluble matter to subside before using the liquid. *Ed. Ph.* 1841.

U. S. Ph. and *Brit. Ph.* saturate thirty-four to forty parts of distilled water, contained in a bottle of double the capacity, with washed chlorine water evolved from one part of black oxide of manganese, and facilitate the absorption by agitating occasionally the loosely corked bottle.

To be kept in well-stopped bottles, and in the dark. Chlorine water is stimulant and antiseptic, and has been used in a variety of diseases. (See Dunglison's *New Rem.*, 6th edit., p. 190, *et seq.*) The dose is from one to four fl. drachms, properly diluted.

Chlorine Collutory.

℞ Chlorine water, half an ounce.
Syrup of mallows, one ounce.

Mix. In aphthous sore mouth. *Radius.*

℞ Chlorine water, half an ounce.
Infusion of sage, six ounces.
Honey of roses, one ounce.

Mix. In same cases. *Radius.*

Chlorine Gargle.

℞ Tragacanth, twelve grains.
Distilled water, four fl. ounces.
Chlorine water,
Syrup, each, half an ounce.

Mix. As a gargle in ulceration, and chronic inflammation of the mouth, and fauces. *Foy.*

Chlorine Injection.

℞ Chlorine water, half a drachm.
Distilled water, one ounce and a half.
Extract of opium, fifteen grains.

Mix. As an injection in ulcers of the uterus. *Phœbus.*

Chlorine Clyster.

℞ Chlorine water, two drachms.
Starch, four drachms.

Extract of opium, half a grain.
Water, six ounces.

Mix. As an enema in the diarrhœa of consumptive patients. *Cadet.*

Chlorine Mixture.

R. Chlorine water,
two to four drachms.
Decoction of mallows,
two ounces and a half.

Mix. A teaspoonful every hour, in softening of the stomach in children. *Radius.*

R. Chlorine water, one fl. drachm.
Lemon syrup, four fl. drachms.
Water, eight fl. drachms.

Mix. In scarlatina. Dose, ten to twenty drops every six or eight hours. *Tweedie.*

R. Chlorine water, two ounces.
Syrup, six ounces.

Mix. A spoonful every two hours, in typhoid fevers. *Swediaur.*

R. Chlorine water, two drachms.
Strawberry water,
one ounce and a half.
Quince mucilage,
Syrup of mallows,
each, six drachms.

Mix. A teaspoonful every two hours, to children in scarlatina. *Radius.*

Chlorinated Oil.

R. Olive oil, at will.

Pass a current of chlorine through it; at the end of two or three days, wash it with cold water. As an application to tinea and lepra. *Deimann.*

Chlorine Ointment.

R. Chlorine water, one part.
Lard, eight parts.

Triturate well together. Employed in itch. *Augustin.*

Chlorine Liniment.

R. Chlorine water, one fl. drachm.
Olive oil, one fl. ounce.

Mix well. In itch, tinea, and herpes. *Deimann.*

R. White wax, two drachms.

Melt by a gentle heat, and add

Almond oil, sufficient

to make a liniment; on cooling, add

Chlorine water,
one drachm and a half.

As an application to foul ulcers. *Ludwig.*

Inhalation of Chlorine.

R. Chlorinated lime, two ounces.

Put in a suitable apparatus, moisten with water, and let the vapor that arises be inhaled. *Brit. Ph.*

CHLOROFORMUM.

CHLOROFORM.—TERCHLORIDE OF FORMYL.

It is prepared by distilling a mixture of about one part of alcohol, four parts chlorinated lime, and twelve parts of water, washing the heavier portion of the distillate with water, then with sulphuric acid and again with water, and rectifying. It is a transparent, not inflammable, heavy fluid, of a peculiar, fragrant, ethereal, apple-like odor, and an intensely sweet taste. In large doses it is a narcotic poison; in medicine, a stimulant, sedative, antispasmodic anodyne, and anæsthetic; for which latter purpose it has attained much celebrity.

Purified Chloroform.

R. Commercial chloroform,
one hundred troyounces.
Sulphuric acid,
twenty troyounces.
Stronger alcohol,
twelve fl. drachms.
Carbonate of sodium,
five troyounces.
Lime in powder, half a troyounce.
Water, ten fl. ounces.

Agitate acid and chloroform occasionally during twenty-four hours; separate lighter liquid, and agitate for half an hour with solution of carbonate of sodium in water. Separate chloroform, mix it with alcohol, and when clear, transfer the heavy transparent layer into a dry retort, add lime, and distil at a temperature of not over 153° F. until one troyounce of residue is left in the retort. *U. S. Ph.*

Its specific gravity is 1.480, boiling point 142° F. It contains a little alcohol, which prevents its decomposition when exposed to light and air. It does not impart any color to an equal bulk of sulphuric acid after agitating and leaving the two liquids in contact for twenty-four hours. It is perfectly neutral, and does not redden a drop of a neutral aqueous solution of litmus when a drachm of the chloroform is evaporated

with it, spontaneously. Purified chloroform only is fit for inhalation. The usual dose, when inhaled, is a fl. drachm, to be increased in a few minutes, if no effect is produced. The best plan of inhaling is to twist a handkerchief into the form of a bird's nest, wet this with the chloroform, and apply it to the mouth and nose. The dose, internally, is from five to twenty minims.

Chloroform Mixture.

℞ Purified chloroform, half a troyounce.
Camphor, sixty grains.
Yolk of egg, one.
Water, six fl. ounces.

Triturate the yolk, add gradually camphor dissolved in chloroform, then the water, and mix thoroughly. Dose, a teaspoonful to a tablespoonful. *U. S. Ph.*

Chloroform Water.

℞ Pure chloroform, half a drachm.
Alcohol, half an ounce.
Water, eight ounces.

Dissolve. Flavored with syrup in tablespoonful doses, in neuralgia, asthma, etc. *Bouchut.*

Compound Tincture of Chloroform.

℞ Pure chloroform, two fl. ounces.
Alcohol, eight fl. ounces.
Compound tincture of cardamom, ten fl. ounces.

Mix. Dose and use similar to next. *Brit. Ph.*

Spirit of Chloroform.

℞ Purified chloroform, one troyounce.
Alcohol, twelve fl. ounces.

Dissolve. Dose, twenty to sixty minims. *U. S. Ph.*

The spirit of *Brit. Ph.* is almost identical with this. It was formerly incorrectly called "chloric ether."

Chloroform Liniment.

℞ Chloroform, three troyounces.
Olive oil, four troyounces.

Dissolve. *U. S. Ph.*

℞ Chloroform, one part.
Expressed almond oil, nine parts.

Dissolve. *Paris Codex.*

℞ Chloroform,
Camphor liniment, each, two fl. ounces.

Dissolve. *Brit. Ph.*

Chloroform and Aconite Liniment. (Compound Chloroform Liniment.)

℞ Chloroform,
Tincture of aconite root, each, two fl. ounces.
Soap liniment, twelve fl. ounces.

Mix. *Maryland Coll. Ph.*

Chloroform Ointment.

℞ White wax, one drachm.
Lard, nine drachms.

Melt together, pour into wide-mouth vial, and add

Chloroform, two drachms.

Cork the vial, and agitate until cold. *Paris Codex.*

℞ Spermaceti ointment, four drachms.
Olive oil, one drachm.
Oxide of zinc, half a drachm.
Chloroform, two fl. drachms.

Mix. Applied in irritable ulcer of rectum. *Curling.*

CHONDRUS.

IRISH MOSS.—CARRAGEEN.

The fronds of *Chondrus crispus*, a seaweed growing on rocks and stones in the seas of northern Europe, especially on the southern and western coasts of Ireland.

Sex. Syst. Cryptog. fuci. *Nat. Syst.* Ceramiaceæ.

Greville, Alg. Brit. 129. Dunglison, New Rem. 6th ed. p. 210.

It is of a yellowish or purplish color, translucent, nearly tasteless, and scentless. It is nutritive and demulcent, and affords a useful article of diet to convalescents. It has also been recommended in scrofula, and bowel and pectoral affections. Before using, it should be soaked in cold water to remove any salt or other impurities.

Decoction of Carrageen.

℞ Carrageen, sliced, half an ounce.
Water, three pints.

Boil for a quarter of an hour, express, and strain. *Béral.*

℞ Carrageen, sliced, half a drachm.
New milk, nine fl. ounces.

Boil to five fl. ounces, strain, and add

Sugar, half an ounce to an ounce.
Bitter almond water, one scruple.
To be taken during the day. *Gräfe.*

℞. Carrageen, four scruples.
New milk, twenty-four fl. ounces.
Boil for ten minutes, express, and add
Orange-flower water, one ounce and a half.

Dry Carrageen Jelly.
Saccharated Carrageen Powder.

℞. Carrageen, ten ounces.
Sugar, forty ounces.
Wash the carrageen with cold water, then boil with sufficient water for an hour, express, allow to settle, and decant; add the sugar, evaporate with continued agitation, dry in thin layers, and powder.
Paris Codex.

Carrageen Jelly.

℞. Carrageen, two drachms.
New milk, one pint.
Boil to consistence of jelly, strain, and add
Sugar, one ounce.
Bitter almonds, two.
Radius.

℞. Saccharated carrageen powder, four ounces.
Sugar, two ounces.
Water, ten ounces.
Rub together, boil, remove the scum, and add
Orange-flower water, half an ounce.
It should weigh twelve ounces and a half.
Paris Codex.

℞. Carrageen, washed, one ounce.
Water, forty ounces.
Boil for half an hour, express, strain, and add
White sugar, two ounces.
Evaporate, stirring continually, to ten ounces. *Ph. Germ.*

Carrageen Troches.

℞. Saccharated carrageen powder, five troyounces.
Powdered tragacanth, one scruple.
Mix. Flavor to suit, and with water form lozenges of thirty grains each. *Mouchon.*

Carrageen Mixture.

℞. Carrageen, half a drachm.
Water, sufficient to obtain six ounces of mucilage; strain, and add
Phosphate of sodium, one drachm and a half.
Syrup of opium, three drachms.
A spoonful, every two hours, in hemoptysis.
Clarus.

CICHORIUM.

Succory.

The *Cichorium intybus* is a perennial herbaceous plant, indigenous to Europe, but naturalized in many places in this country.
Sex. Syst. Syngen. æqual. *Nat. Syst.* Asteraceæ.
The whole plant is bitter, the root the most so. It is tonic, aperient, and deobstruent. The dried and torrefied root is used in Europe to mix with, or as a substitute for coffee.

Extract of Succory.

℞. Juice of succory, at will.
Evaporate to one-third, cool, filter, and evaporate to proper consistence.
Paris Codex.
Dose, from ten grains to half a drachm.

Infusion of Succory.

℞. Dried succory, half an ounce.
Boiling water, two pints.
Infuse, and strain, and add
Syrup of maidenhair, one drachm.
Cottereau.

Compound Syrup of Succory.

℞. Juice of succory,
" dandelion,
" fumitory, each, six ounces.
Sugar, one pound.
Boil to proper consistence, and strain.
Dose, one to two ounces. As a diuretic.
St. Marie.

CIMICIFUGA.

Black Snakeroot.

This is the root of *Cimicifuga racemosa*, a native, found in many parts of the United States, in shady places.
Sex. Syst. Polyand. di-pent. *Nat. Syst.* Ranunculaceæ.
Torrey and Gray, Fl. 1. 36. Griffith, Med. Bot. 92.
The rhizome is thick, contorted, dark

brown, with numerous radicles. The odor is peculiar and unpleasant, and the taste bitter and somewhat astringent. It is acro-narcotic, and is used in rheumatism, dropsy, pectoral affections, chorea, etc. The dose of the powder is a drachm, several times a day.

Decoction of Black Snakeroot.

℞. Black snakeroot (contused), one ounce.
Water, one pint.

Boil for a short time, and strain. Dose, one to two fl. ounces. *Wood.*

Tincture of Black Snakeroot.

℞. Bruised black snakeroot, four ounces.
Alcohol, one pint.

Digest for fourteen days, and filter. Dose, twenty drops or more, three or four times a day. *Carson.*

Used in rheumatic cases.

Fluid Extract of Black Snakeroot.

℞. Black snakeroot, in powder, No. 80, sixteen troyounces.
Stronger alcohol, sufficient.

Moisten powder with four fl. ounces of the alcohol, pack in a percolator, add twelve fl. ounces of stronger alcohol, and macerate for four days. Then displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, ten to thirty minims.

CINCHONA.

Peruvian Bark.

This is the bark of several species of *Cinchona*, all natives of South America. There are numerous varieties of this article used in medicine, but the state of our knowledge on the subject does not permit a reference of them to a particular species of the tree, except in a few cases. At the revision of the U. S. Pharmacopœia, in 1870, the yellow bark was referred to C. Calisaya, the pale bark to C. Condaminea, and C. Micrantha, and the red bark to Cinchona succirubra. (See Griffith, *Med. Bot.* 368.) Peruvian bark owes its properties to the presence of several alkaloids, called quinia, cinchonia, etc.

It is a bitter tonic and antiperiodic, and is used in a variety of diseases, and is given in a multitude of forms. The dose in powder as a febrifuge is a drachm, frequently repeated; as a tonic from ten to thirty grains. Its use is now much superseded by that of quinia.

Compound Powder of Peruvian Bark.

℞. Powdered Peruvian bark,
Cremor tartar, each, one ounce.
Powdered cloves, one drachm.

Mix. A drachm and a half every two hours, in the apyrexia of fevers. *Ellis.*

℞. Powdered Peruvian bark, half an ounce.
Virginia snakeroot, one drachm.
Bicarbonate of sodium, two scrup.

Mix, and divide into four powders, one to be given every two hours, in apyrexia of obstinate intermittents. *Ellis.*

℞. Powdered Peruvian bark,
" uva ursi, each, one or two drachms.
" opium, three grains.

Mix, and divide into six powders; one to be taken three or four times a day, followed by a draught of two ounces of lime water. Antilithic. *Ferriar.*

℞. Powdered Peruvian bark, one ounce.
Tartar emetic, two grains.
Powdered opium, one grain.

Mix, and divide into eight powders; one to be taken every two hours. *Brera.*

℞. Powdered Peruvian bark,
Sulphate of magnesium, each, six drachms.

Mix, and divide into four powders. One every two hours, where purging is required, and at the same time a tonic impression to be made. *Ellis.*

℞. Powdered Peruvian bark, thirty grains.
Aromatic powder, ten grains.

Make a powder, to be taken in a cup of milk every three hours. In convalescence from fevers. *A. T. Thomson.*

Powder of Peruvian Bark and Arnica.

℞. Powdered Peruvian bark,
" arnica root,
" camphor,
} equal parts.

Mix. As an application to gangrenous ulcers. *Cadet.*

Powder of Peruvian Bark and Cascarilla.

℞. Powdered Peruvian bark, two drachms.
" cascarilla, twelve grains.

Mix. In apyrexia of intermittents. *Foy.*

Powder of Peruvian Bark and Camphor.

℞. Powdered Peruvian bark, half an ounce.
" camphor, one scruple.
" gum Arabic, two drachms.

Mix. As an application to atonic ulcers. *Ph. Gen.*

Peruvian Bark Dentifrice Powders.

℞. Powdered Peruvian bark, one ounce and a half.
" red saunders, half an ounce.
Oil of bergamot,
Oil of cloves, each, twelve drops.

Mix. *Hufeland.*

℞. Powdered Peruvian bark, three ounces.
" cremor tartar, } each,
" sage leaves, } half an
" myrrh, } ounce.
" catechu, six drachms.
Oil of cloves, sixteen drops.

Mix. *Hesse Ph.*

℞. Powdered Peruvian bark, one oz.
" orris root, } each,
" sage leaves, } half an
" myrrh, } ounce.

Mix. *Fulda Disp.*

℞. Powdered Peruvian bark, two ounces.
" chloride of ammonium, half an ounce.
" orris root, one ounce.
" catechu,
" myrrh, each, six drachms.
Oil of cloves, twelve drops.

Mix. *Pideret.*

Powder of Peruvian Bark and Valerian.

℞. Powdered Peruvian bark, two drachms.
" valerian, one drachm.

Mix. Divide into four powders. In nervous disorders. *Ratier.*

Powder of Peruvian Bark and Isinglass.

℞. Powdered Peruvian bark, one ounce.
Isinglass, one drachm and a half.

Mix, and divide into sixteen powders. Dose, at first, from three to six a day, in passive menorrhagia, leucorrhœa, chronic diarrhœa, etc. *Brera.*

Peruvian Bark Mixture.

℞. Powdered cinchona, half an ounce.
Confection of opium, one drachm.
Lemon juice, two fl. drachms.
Port wine, four fl. ounces.

Mix. A wineglassful every two hours, in the apyrexia of intermittent fever. *Meigs.*

℞. Powdered cinchona, six drachms.
Confection of opium, three drachms.
Cremor tartar, two drachms.
Water, six fl. ounces.

Mix. A tablespoonful every hour. *Dewees.*

℞. Powdered Peruvian bark, two drachms.
Wine of opium, sixty drops.
Nitrate of potassium, five grains.
Infusion of gentian, six fl. ounces.

Mix. An ounce every two hours. *Pierquin.*

℞. Powdered Peruvian bark, two drachms.
Compound tincture of bark, one fl. ounce.
Decoction of red bark, three fl. ounces.
Syrup, half fl. ounce.

Mix. A tablespoonful every one or two hours in the apyrexia. *Ellis.*

Extract of Pale Cinchona.

℞. Bruised pale bark, one part.
Alcohol, sp. gr. .893, four parts.

Digest for twenty-four hours, express, strain, and repeat operation with two parts of alcohol of same strength. Distil the mixed tinctures and evaporate to proper consistence. *Ph. Germ.*

The vinous extract of Peruvian bark of some old pharmacopœias was made with white wine in the same manner.

Cold Prepared Aqueous Extract of Cinchona.

℞. Bruised pale bark, two parts.
Distilled water, twelve parts.

Macerate for two days, express, strain, and repeat operation with six parts of distilled water. Evaporate the clear mixed liquids to one and a half parts, cool, filter, and evaporate to proper consistence. *Ph. Germ.*

Extract of Yellow Cinchona.

℞. Yellow bark in fine powder, twelve troyounces.
Alcohol, three pints.
Water, sufficient.

Macerate the bark in twenty fl. ounces of alcohol for four days, and obtain tincture by displacement. When the liquid measures three pints, set aside and obtain six pints of infusion. Distil off alcohol from tincture, and evaporate infusion to the consistence of thin honey; mix, and evaporate to proper consistence. The extract of red bark is prepared in the same way. *U. S. Ph.*

Dose, ten to thirty grains.

Precipitated Extract of Cinchona.

℞. Bruised yellow bark, two pounds.
Distilled water, one gallon.
Muriatic acid, half a fl. ounce.

Boil and strain. Then boil the residue twice in an equal quantity of acidulated water. Mix the decoctions, filter, and add lime, while precipitation occurs. Wash the precipitate, exhaust it with hot alcohol, and evaporate by a water-bath, to a pilular consistence.

Dose, two to five grains. *C. Ellis.*

Compound Bolus of Extract of Peruvian Bark.

℞ Extract of Peruvian bark, twenty grains.
Nitrate of potassium, thirty grs.
Confection of orange-peel, sufficient.

Mix, and form five boluses. *Pierquin.*

Compound Pills of Extract of Peruvian Bark.

℞. Extract of Peruvian bark, one drachm.
Extract of opium, one grain.
Camphor, twelve grains.
Powdered Peruvian bark, sufficient.

Beat into a mass, and form twelve pills. One to be taken three or four times a day. *Ellis.*

℞. Extract of Peruvian bark, " rhubarb, " gentian, " blessed thistle, } equal parts.

Beat into a mass, and form pills of four grains. Dose, one or two, three times a day. *St. Marie.*

℞. Extract of Peruvian bark, " gentian, each, one drachm.
Sulphate of iron, half a drachm.
Powdered myrrh, one drachm.
Oil of caraway, ten drops.
Syrup of ginger, sufficient.

Beat well together, and divide into forty pills. Three to be taken three times a day. In the apyrexia of intermittents. *Thomson.*

℞. Extract of Peruvian bark, two drachms.
Powdered alum, one drachm.
Syrup, sufficient.

Mix, and divide into thirty-six pills. Four to be taken every four or six hours. In passive hemorrhages. *A. T. Thomson.*

Decoction of Yellow Cinchona.

℞. Yellow cinchona, bruised, one ounce.
Water, one pint.

Boil for fifteen minutes, strain, and add sufficient water to make a pint. Dose, two fl. ounces. *U. S. Ph.*

The decoction of red bark is prepared in the same manner; that of *Brit. Ph.* is of nearly the same strength.

℞. Red cinchona, bruised, one ounce.
Water, one pint.

Boil for ten minutes, and, while hot, add

Virginia snakeroot, half an ounce.
Orange-peel, two drachms.

Infuse for half an hour, near the fire, in a covered vessel. Dose, a wineglassful every hour. *Ellis.*

Decoction of Cinchona Mixture.

℞. Decoction of cinchona, six ounces.
Tincture of cinchona, one ounce.
Diluted sulphuric acid, one drachm.
Syrup of orange-peel, half an ounce.

Mix. A tablespoonful every hour or two. *Foy.*

℞. Decoction of cinchona, eight ounces.
Infusion of arnica flowers, six ounces.
Camphor, two scruples.
Syrup of tolu, one ounce.
Mucilage of gum, four ounces.

Mix. To be taken in divided doses, during the day. *Brugnatelli.*

Decoction of Peruvian Bark and Cascarilla.

℞. Peruvian bark, one ounce.
Cascarilla, two drachms.
Water, twelve fl. ounces.

Boil to eight ounces, express, and strain, and add, when cold,

Sulphuric ether, two drachms.

Mix. *Copenhagen Ph.*

Decoction of Cinchona and Rhatany.

℞. Peruvian bark,
Rhatany, each, half an ounce.
Water, sufficient

to obtain nine ounces of decoction; strain, and add

Vinous extract of cinchona, four scruples.
Compound tincture of cinchona, one fl. drachm.
Citron water, one fl. ounce.

Mix. In chronic diarrhœa. *Brera.*

Compound Decoction of Cinchona.

℞. Bruised cinchona, one ounce.
Virginia snakeroot, half an ounce.
Orange-peel, two drachms.
Powdered cloves, one drachm.
Carbonate of potassium, one drachm.

Mix. Put the mixture into a proper vessel, with three half pints of water, boil down gently to one pint; let settle, decant. Dose, a wineglassful every hour, for eight hours, in the apyrexia. *Dewees.*

Infusion of Yellow Cinchona.

℞. Yellow cinchona, in powder, No. 50, one troyounce.
Aromatic sulphuric acid, one fl. drachm.
Water, sufficient.

Mix the acid with a pint of water; moisten the powder with half a fl. ounce of the mixture, pack firmly in a glass funnel and displace a pint, using the mixture, and afterwards water. *U. S. Ph.*

Dose, one to two fl. ounces.

The infusion of red bark is prepared in the same manner.

℞. Bruised yellow cinchona, half an ounce (avoir.).
Boiling distilled water, ten fl. ounces.

Infuse for two hours and strain. *Brit. Ph.*

This represents twenty-two grains of cinchona in the fl. ounce, eight grains less than the preceding.

Infusion of Cinchona and Serpentaria.

℞. Bruised cinchona, ten drachms.
Boiling water, one pint.

Infuse for four hours, then boil for half an hour, then add

Virginia snakeroot, two drachms.

Infuse for two hours, and strain. *Saunders.*

Infusion of Cinchona and Magnesia.

℞. Powdered cinchona, one ounce.
Magnesia, one drachm.
Boiling water, twelve fl. ounces.

Infuse for twelve hours, express, and strain. Said to be more astringent than other infusions. *Van Mons.*

Compound Infusion of Cinchona.

℞. Cinchona,
Juniper berries, each, one drachm.
Orange-peel,
Cinnamon, each, two drachms.
Canella, half a drachm.
Ipecacuanha, fifteen grains.
Boiling water, seven fl. ounces.

Infuse and strain, then add

Extract of juniper berries, one drachm and a half.

In spoonful doses, in atonic dropsies. *Bories.*

Infusion of Cinchona with Cantharides.

℞. Infusion of cinchona, six fl. ounces.
Tincture of cantharides,
" opium, each, half a fl. ounce.

Mix. A teaspoonful or more, thrice daily, in chronic hooping-cough. *Graves.*

Fluid Extract of Cinchona.

℞. Yellow cinchona in powder, No. 80, sixteen troyounces.
Glycerin, four fl. ounces.
Alcohol,
Water, each, sufficient.

Prepare a mixture of half a pint of alcohol, three fl. ounces of glycerin, and five fl.

ounces of water; with five fl. ounces of it moisten the cinchona, pack into a glass percolator, add the remainder of the mixture and macerate for four days. Then percolate with diluted alcohol to obtain two pints of tincture, reserve the first fourteen fl. ounces, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion.

Dose, ten to thirty minims. *U. S. Ph.*

℞ Yellow cinchona in coarse powder, one pound (avoir.).
Distilled water, sufficient.
Alcohol, one fl. ounce.

Macerate the cinchona with two pints of water for twenty-four hours, then displace, adding more water until twelve pints of infusion are obtained; evaporate this below 160° to a pint, filter, evaporate again to three fl. ounces, and when cool, stir in the alcohol. Specific gravity about 1.100.

Dose, ten to thirty minims. *Brit. Ph.*

Electuary of Cinchona.

℞ Powdered cinchona, one ounce.
Syrup of orange-peel, sufficient.

A teaspoonful every hour. *Radius.*

Powdered cloves or other aromatics may be added.

Astringent Electuary of Cinchona.

℞ Powdered cinchona,
" orange-peel,
each, six drachms.
" crabs' eyes,
two drachms.
Confection of red roses,
" rose hips, each,
six drachms.
Syrup of catechu, sufficient.

Mix. Dose, one drachm, two or three times a day, in chronic diarrhœa. *Saunders.*

Electuary of Cinchona and Catechu.

℞ Powdered cinchona, one ounce.
" catechu,
Balsam of tolu, each, one drachm.
Syrup of comfrey, sufficient.

Divide into ten doses, one to be taken twice or three times a day, in some appropriate vehicle. Much praised in hemoptysis. *Pierquin.*

Electuary of Cinchona and Tin.

℞ Powdered cinchona, one ounce.
" tin,
" valerian, each,
half an ounce.
Syrup, sufficient.

Mix. Dose, a drachm, morning and evening, in epilepsy. *Cadet.*

Electuary of Cinchona and Rhubarb.

℞ Powdered yellow cinchona,
ten drachms.
" rhubarb, four drachms.
Chloride of ammonium,
two scruples.
Syrup, sufficient.

Mix. For twenty doses. *Dorvault.*

Electuary of Cinchona and Iron.

℞ Powdered cinchona, six drachms.
Vallet's mass,
Confection of opium,
each, two drachms.
Syrup of cinnamon, sufficient.

Mix. Dose, a drachm, morning and evening, in ascites, after the evacuation of the fluid. *Cadet.*

Tincture of Cinchona.

℞ Yellow cinchona, in powder,
No. 50, six troyounces.
Alcohol,
Water, each, sufficient.

Mix three measures of alcohol with one of water, moisten the cinchona with two fluidounces, and displace two pints of tincture. *U. S. Ph.*

The tincture of *Brit. Ph.* is almost of same strength, but made with a weaker alcohol of 0.920 specific gravity; that of *Ph. Germ.* is also nearly of same strength, but made with pale bark. The tinctures of gray, red, and yellow cinchona of the *Paris Codex* correspond with that of *U. S. Ph.*

Generally employed as an adjuvant to other preparations of bark, in the dose of one to four fluidrachms.

Compound Tincture of Peruvian Bark. (Huxham's Tincture.)

℞ Red cinchona, in powder,
No. 50, four troyounces.
Bitter orange-peel, in powder,
No. 50, three troyounces.

Virginia snakeroot, in powder, No. 50, six drachms.
Alcohol,
Water, each, sufficient.

Moisten the mixed powders with four fl. ounces of a mixture of three measures of alcohol to one of water, and displace two pints and a half of tincture. *U. S. Ph.*

℞ Pale cinchona, in moderately fine powder, two ounces (avoir.)
Bitter orange-peel, cut and bruised, one ounce "
Serpentaria, bruised, half an ounce "
Saffron, sixty grains.
Cochineal, in powder, thirty grains.
Proof spirit, sp. gr. 0.920, one pint (Imper.)

Macerate the dry materials for forty-eight hours in fifteen fluidounces of the spirit, transfer to a percolator, add remaining five fl. ounces of spirit, and when fluid ceases to pass, express the contents of the percolator, filter the product, mix the liquids, and add enough proof spirit to make one pint imperial. *Brit. Ph.*

℞ Pale cinchona, bruised, six parts.
Bitter orange-peel, bruised,
Gentian, bruised, each, two parts.
Cinnamon, bruised, one part.
Alcohol, sp. gr. 0.892, fifty parts.

Digest for eight days, express, and filter. *Ph. Germ.*

An excellent stomachic and useful adjunct to other preparations of bark. The last formula is Whytt's tonic elixir.

Dose, a teaspoonful to a tablespoonful.

Tincture of Peruvian Bark and Valerian.

℞ Tincture of Peruvian bark,
" valerian, each, one fl. ounce.
" cardamom, two fl. drachms.
Mint water, four fl. ounces.

Mix. A tablespoonful every three hours, as a tonic in nervous temperaments. *Ellis.*

Ammoniated Tincture of Cinchona.

℞ Powdered cinchona, one ounce.
Ammoniated alcohol, eight fl. ounces.

Macerate for eight days in a covered vessel, express, and filter. *Swediaur.*

Tincture of Bark and Cantharides.

℞ Tincture of bark, three ounces.
Paregoric elixir, half an ounce.
Tincture of Spanish flies, one drachm.

Mix. Used, it is stated, with great success, in hooping-cough. To be given in small doses, until a slight strangury is caused. *Sutcliffe.*

Cataplasm of Peruvian Bark.

℞ Cataplasm of linseed meal, one pound.
Powdered Peruvian bark, four ounces.

Mix. *Foy.*

℞ Powdered Peruvian bark,
" charcoal, each, one ounce.
" camphor, one drachm and a half.
Oil of turpentine, sufficient.

Mix. *Phœbus.*

These cataplasms are employed as applications to gangrenous ulcers, etc.

Cerate of Peruvian Bark.

℞ Simple cerate, eight ounces.
Camphor, one drachm and a half.

Rub together, and gradually incorporate
Decoction of Peruvian bark, one ounce.

An application to ill-conditioned ulcers. *Van Mons.*

Peruvian Bark Pomatum.

℞ Extract of Peruvian bark, half a drachm.
Oil of roses, two drops.
" bergamot, eight drops.
Beef marrow, half an ounce.

Incorporate well. As an application to promote the growth of the hair. *Phœbus.*

Clyster of Peruvian Bark.

℞ Decoction of Peruvian bark, four ounces.
Yolk of egg, one.
Powdered Peruvian bark, three drachms.
Tincture of opium, twelve drops.

Mix. *Radius.*

℞. Extract of Peruvian bark, half a drachm.
Warm water, four fl. ounces.
Dissolve, and add
Olive oil, half a fl. ounce.
Tincture of opium, ten drops.

Mix. To be administered every four hours, in the apyrexia of intermittents. *Ellis.*

Gargle of Peruvian Bark.

℞. Tincture of Peruvian bark,
Syrup of mulberries, each, four fl. drachms.
Spirit of horseradish, one fl. drachm.
Infusion of sage, six fl. ounces.

Mix. In obstinate sore throat, when active inflammation has subsided. *Cadet.*

Lotion of Peruvian Bark.

℞. Extract of Peruvian bark,
Sulphuric ether, each, one drachm.
Alcohol, seven drachms.

Mix. As a friction, three times a day, in weakness of the back. *Augustin.*

Peruvian Bark Beer.

℞. Bruised Peruvian bark, one and a half ounces.
Cinnamon, two drachms.
Grated nutmeg, seven drachms.
Yeast, two ounces.
Sugar, twenty-five ounces.
Water, one hundred fl. ounces.

Mix, and expose to a warm temperature. After fermentation, decant and strain. Three or four glasses to be taken during the apyrexia of intermittents.
Ferrara Ph.

Syrup of Cinchona.

℞. Powdered yellow cinchona, four troyounces.
Alcohol of 30 per ct.,
Sugar, each, forty troyounces.
Water, sufficient.

Displace the cinchona first with the alcohol, then with water to obtain forty troyounces of tincture; distil off alcohol, cool, filter, and with the sugar make syrup weighing sixty-one troyounces. *Paris Codex.*

Vinous Syrup of Cinchona.

℞. Extract of yellow cinchona, half a troyounce.
Malaga wine, twenty-one troyounces and a half.
Sugar, twenty-eight troyounces.

Dissolve the extract in the wine, afterwards the sugar, and strain. Dose, a tablespoonful. *Paris Codex.*

The vinous syrup of pale cinchona is made in the same manner, using a troyounce of extract.

Syrup of Cinchona and Iron.

℞. Vinous syrup of pale cinchona, one hundred parts.
Ammonio-citrate of iron, one part.
Distilled water, two parts.

Dissolve the salt in the water, and mix with syrup. *Paris Codex.*

Wine of Cinchona.

℞. Yellow cinchona, bruised, three parts.
Alcohol of 60 per ct., six parts.

Macerate for twenty-four hours, and add

Red wine, one hundred parts.

Macerate for ten days, express, and filter.
Paris Codex.

Ph. Germ. directs five parts of Calisaya to one hundred of red wine.

Dose, one to two fluidounces.

Compound Wine of Cinchona.

℞. Bruised yellow cinchona, ten parts.
" bitter orange-peel,
" chamomile, each, one part.
Alcohol, of 80 per ct., ten parts.
Good white wine, ninety parts.

Macerate for ten days, express, and filter.
Dose, a tablespoonful. *Paris Codex.*

Wine of Cinchona and Iron.

℞. Pyrophosphate of iron, ten parts.
Extract of pale cinchona, five parts.
White wine, one thousand parts.

Dissolve and filter. Dose, a tablespoonful or two. *Robiquet.*

Aromatic Fluid Extract of Cinchona.

℞. Yellow cinchona, sixteen troyounces.
Calamus, Cardamom, Ginger, each, two hundred and fifty-six grains.

Sugar, nine troyounces and five drachms.

Displace the cinchona in fine powder with diluted alcohol until four pints of tincture have been obtained; reserve the first pint, distil and evaporate the remainder to six fluidounces, dissolve in it the sugar, add the reserved portion and strain while hot. Make up to two pints with tincture obtained by percolating the finely powdered aromatics with alcohol.

Each teaspoonful represents thirty grains of Calisaya bark and one grain of each of the aromatics. *Squibb.*

Elixir of Calisaya.

℞ Yellow cinchona, one troyounce.
Orange-peel, four drachms.
Coriander, two drachms.
Cochineal, one drachm.

Displace the finely powdered articles with a mixture of twelve measures of deodorized alcohol and ten of water until twenty-two fluidounces are obtained, add twenty grains of tartaric acid and five fluidounces each of glycerin and syrup, and after standing a day, filter. *Newark Ph. Assoc.*

Each fluidounce represents fifteen grains of Calisaya bark.

CINCHONIA.

Cinchonia.

An alkaloid existing in Peruvian bark; most abundant in the pale kinds.

It is obtained from the mother waters, from which sulphate of quinia has been crystallized, by rendering them alkaline with soda, washing the precipitate with small quantities of cold alcohol to remove other alkaloids, dissolving residue in diluted sulphuric acid, decolorizing solution with animal charcoal, and crystallizing. By redissolving the crystals in acidulated water, precipitating with ammonia, washing with water and crystallizing from hot alcohol, cinchonia is obtained in white translucent crystals, which are almost insoluble in water, ammonia water, and ether, and have a bitter taste.

Tartrate of cinchonia is obtained by precipitating solution of sulphate of cinchonia with tartrate of potassium; picrate and tannate of cinchonia are deposited on adding picric or tannic acid to solution of sulphate of cinchonia; sulphate, muriate, nitrate, phosphate, and kinate of cinchonia are prepared by saturating the warm diluted acid with the alkaloid, and crystallizing.

Pills of Cinchonia.

℞ Cinchonia, one scruple.
Confection of roses, sufficient.

Mix, and form twenty-four pills. Dose, two to eight. *Cadet.*

Pills of Sulphate of Cinchonia.

℞ Sulphate of cinchonia, half a drachm.
Confection of roses, sufficient.

Mix, and make thirty pills. Dose, one to eight. *Cadet.*

Bolus of Cinchonia.

℞ Sulphate of cinchonia, three grains.
Crumb of bread, Honey, Liquorice, each, sufficient.

Mix, and form a bolus. One every two hours. *Brera.*

Syrup of Cinchonia.

℞ Sulphate of cinchonia, forty-eight grains.
Syrup, one pint.

Mix. A tablespoonful is a dose. *Cadet.*

℞ Sulphate of cinchonia, twenty-four grains.
Orange-flower water, two fl. drachms.
Syrup, twelve fl. ounces.

Mix. As above. *Giordano.*

Wine of Cinchonia.

℞ Sulphate of cinchonia, twenty-four grains.
Madeira wine, two pints.

Make solution, and filter. Dose, one to four ounces. *Cottereau.*

Tincture of Cinchonia.

℞ Sulphate of cinchonia, twelve grains.
Alcohol, one ounce.

Dissolve. Dose, a teaspoonful. *Foy.*

Mixture of Sulphate of Cinchonia.

℞ Sulphate of cinchonia, three grains.
Peppermint water, three ounces.
Syrup of capillaire, one ounce.

Mix. To be taken in four doses, during the day. *Cadet.*

CINNAMOMUM.

Cinnamon.

This is the bark of *Cinnamomum Zeylanicum*, and *C. aromaticum*, and also, perhaps, of other species; all natives of various parts of the tropical regions of Asia. That most commonly used in this country is what is termed cassia, in commerce, and is imported from China.

Sex. Syst. Enneand. monog. *Nat. Syst.* Lauraceæ.

Nees, Laurineæ. 52. Griffith, Med. Bot. 555.

Chinese cinnamon is in tubular pieces, of a light brownish-red color, of an aromatic, warm, agreeable taste, and of a fragrant, peculiar smell. Ceylon cinnamon occurs in quills consisting of six or more strips of thin bark convoluted around each other; it is much lighter in color, and more agreeable in odor and taste; it is the only kind recognized by *Brit. Ph.* Both kinds are warm cordial stimulants, and astringents.

Dose, in powder, ten grains to a scruple.

Compound Powder of Cinnamon.

℞ Powdered cinnamon,
" cardamom seeds,
" ginger, each, one ounce.

Mix thoroughly. *Brit. Ph.*

℞ Powdered cinnamon, five parts.
" cardamom fruit, three parts.
" ginger, two parts.

Mix thoroughly. *Ph. Germ.*

Stimulant, and carminative. Dose, ten to thirty grains, in debility of the stomach, with flatulence. See also Aromatic Powder, page 206.

℞ Powdered cinnamon, twenty grains.
" cloves, twelve grains.
" vanilla, six grains.
Rice flour, six drachms.
Sugar, half an ounce.

Mix. Dose, six grains to a scruple. *Spielmann.*

Cinnamon Lozenges.

℞ Powdered sugar,
Cinnamon water, each, six ounces.

Boil to syrup, and add

Powdered sugar, one pound.
Oil of cinnamon, one drachm and a half.

Mix, make lozenges, and dry. *Taddei.*

Compound Electuary of Cinnamon.

℞ Confection of orange-peel, three ounces.
" nutmeg, one ounce and a half.
" ginger, six drachms.
Powdered cinnamon, half an ounce.
Syrup of orange-peel, sufficient.

Mix. *Swediaur.*

Infusion of Cinnamon.

℞ Bruised cinnamon, half an ounce.
Boiling water, two pints.

Infuse. In dyspepsia and nervous colics. *Radius.*

Compound Vinegar of Cinnamon.

℞ Cinnamon, Cloves, Nutmeg, each, one drachm.
Peppermint, half an ounce.
Lavender,
Rosemary, each, one ounce.
Vinegar, eight fl. ounces.
Diluted alcohol, twenty fl. ounces.

Mix, and distil twenty-eight ounces. Used as an aromatic. *Van Mons.*

Wine of Cinnamon.

℞ Powdered cinnamon, one troy-ounce
Malaga wine, a pint.

Macerate for a week, and filter. *Béral.*

Compound Wine of Cinnamon.

℞ Powdered cinnamon, Cloves, Mace, Cardamom, each, half a drachm.
White wine, two pints.

Digest, filter, and add

Sugar, ten ounces.

As a cordial stomachic and stimulant. *Augustin.*

Tincture of Cinnamon.

℞ Cinnamon in powder, No. 60, three ounces.
Alcohol,
Water, each, sufficient.

Displace with a mixture of two measures of alcohol to one of water, until two pints have been obtained. *U. S. Ph.*

Dose, one to four fl. drachms.

A fluidounce represents forty-five grains, that of *Brit. Ph.* about fifty-four, and that of *Ph. Germ.* and *Paris Codex* about ninety grains of cinnamon.

Compound Tincture of Cinnamon.

℞ Bruised cinnamon, one ounce.
" cardamom, half an ounce.
" ginger, three drachms.
Diluted alcohol, two pints.

Macerate for fourteen days, express, and filter. *U. S. Ph.* 1840.

A warm, aromatic tincture, useful in flatulence, gastrodynia, etc. Dose, one to two fl. drachms.

℞ Cinnamon, four parts.
Cardamom, Cloves, Galagal, Ginger, each, one part.
Alcohol (0.892), fifty parts.

Digest for eight days, express, and filter. This is the *aromatic tincture* of *Ph. Germ.*

Tincture of Cinnamon Gargle.

℞ Tincture of cinnamon, one part.
Syrup of currants, two parts.
Peppermint water, sixteen parts.

Mix. In malignant sore throat. *Foy.*

Ethereal Tincture of Cinnamon.

℞ Bruised cinnamon, three drachms.
" cardamom, half an ounce.
" angelica, one drachm and a half.
" long pepper, one drachm.
Sulphuric ether, five fl. ounces.
Diluted alcohol, ten fl. ounces.

Macerate for eight days, express, and filter. Stomachic and carminative. Dose, thirty to fifty drops. *Niemann.*

Spirit of Cinnamon. Essence of Cinnamon.

℞ Oil of cinnamon, one fl. ounce.
Stronger alcohol, fifteen fl. ounces.

Dissolve.

Dose, twenty to thirty minims. *U. S. Ph.*

℞ Powdered cinnamon, one part.
Alcohol of 80 per ct., eight parts.

Macerate for four days, add some water, and distil in water-bath eight parts. *Paris Codex.*

Dose, a teaspoonful.

The *compound spirit of cinnamon of Paris Codex* contains twenty-two aromatics.

Cinnamon Water.

℞ Oil of cinnamon, half fl. drachm.
Carbonate of magnesium, one drachm.
Distilled water, two pints.

Rub the oil with the magnesia, and both with the water, and filter. *U. S. Ph.*

℞ Cinnamon in powder, No. 20, nine troyounces.
Water, eight pints.

Macerate, and distil four pints. *U. S. Ph.*

Cinnamon water of *Brit. Ph.* is of same strength. *Paris Codex* distils from one part of cinnamon four parts, and *Ph. Germ.* ten parts of water.

Mostly employed as a vehicle or adjuvant to other medicines; the distilled cinnamon water is most pleasant.

Spirituous (Vinous) Cinnamon Water.

℞ Bruised cinnamon, one part.
Alcohol, sp. gr. 0.892, one part.
Water, ten parts.

Macerate, and distil five parts. *Ph. Germ.*

More stimulating than the former.

Syrup of Cinnamon.

℞ Cinnamon, bruised, two parts.
Spirituous cinnamon water, twelve parts.
Rose water, two parts.

Macerate for two days, and in eleven parts of the filtrate dissolve

Sugar, eighteen parts. *Ph. Germ.*

Oil of Cinnamon.

℞ Bruised cinnamon, five parts.
Water, twenty parts.

Macerate for two days, and add

Sea salt, one part.

Distil five parts, separate the oil, return the distilled water, and distil again; repeat this operation as long as any oil is obtaind. *Paris Codex.*

Cinnamon Spice Plaster.

℞ Olibanum, three ounces.
Yellow wax, half an ounce.
Powdered cinnamon, six drachms.

Oil of pimento,
" lemons, each, two drachms.

Melt the wax and olibanum, and add the cinnamon, rubbed with the oils. *Coxe.*

COCCULUS.

Cocculus Indicus.

This is the fruit of *Anamirta cocculus*, a woody vine, native of the East Indies.

Sex. Syst. Dicæc. dodecand. *Nat. Syst.* Menispermaceæ.

Wight and Arnott, 1, 446. Griffith, Med. Bot. 105.

The berries are about the size of a pea, roundish kidney shaped, with a thin, dry, blackish, external coat, inclosing another of a lighter color, containing an oily, bitter, white kernel. They are inodorous, but of a permanent, bitter taste. They are acro-narcotic, and owe their properties to the presence of a peculiar principle, called *picrotoxin*. They are seldom used in medicine.

Ointment of Cocculus Indicus.

℞. Cocculus indicus, at will.

Separate the kernels, beat them in a mortar; first alone, then with a little lard; finally, add lard equal to five times the weight of kernels. *Ed. Ph.*

Used for the destruction of vermin, and in the treatment of ringworms and scabies of the scalp.

Ointment of Picrotoxin.

℞. Picrotoxin, six grains.
Lard, one ounce.

Mix well. In tinea. *Radius.*

COCCUS.

Cochineal.

Cochineal is a small, hemipterous insect, inhabiting Mexico and some parts of South America, living principally on different species of cactus, and especially the *Opuntia cochinillifera*. It is in grains of a reddish-black color, often covered with a white powder. It has a feeble odor, and a bitterish, somewhat acidulous taste. The powder is of a reddish-purple color, tinging fluids of a deep red. It is said to be somewhat anodyne and antispasmodic, but is principally used as a coloring agent.

Tincture of Cochineal.

℞. Powdered cochineal, two ounces and a half.
Proof spirit, twenty fl. ounces.

Macerate seven days, express, and filter. *Brit. Ph.*

Advised in convulsive coughs. Dose, twenty drops to a fl. drachm.

Mixture of Cochineal and Carbonate of Potassium.

℞. Carbonate of potassium, one scruple.
Powdered cochineal, half a scruple.
Sugar, one drachm.
Distilled water, four fl. ounces.

Make mixture. Dose, for children, a teaspoonful, every two or three hours. A highly popular remedy in hooping-cough. *Ellis.*

Mixture of Cochineal and Common Salt.

℞. Common salt, three drachms.
Powdered cochineal, fifteen grains.

Divide into six doses. One to be taken every morning, the last followed by a purge. As a vermifuge. *Rush.*

COCHLEARIA.

Scurvy Grass.

Scurvy grass is the *Cochlearia officinalis*, an herbaceous plant, native of the northern parts of Europe, and cultivated there and in the United States as a garden herb.

Sex. Syst. Tetradyn. silic. *Nat. Syst.* Brassicaceæ.

Griffith, Med. Bot. 131.

The whole herb is used; it has a penetrating and acrid smell when bruised, and a pungent, bitter taste. It is antiscorbutic, aperient, and diuretic.

Conserve of Scurvy Grass.

℞. Fresh scurvy grass, one part.
Sugar, three parts.

Beat together into a pulp and pass through a hair sieve. Dose, a teaspoonful. *Paris Codex.*

Electuary of Scurvy Grass.

℞. Conserve of scurvy grass, one ounce and a half.
Calamus, one drachm.
Syrup of orange-peel,
Aromatic sulphuric acid, each, sufficient.

Mix. A spoonful every two hours, as an antiscorbutic. *Augustin.*

Spirit of Scurvy Grass.

℞. Fresh scurvy grass, cut, eight parts.
Alcohol,
Water, each, three parts.

Macerate, and distil four parts. *Ph. Germ.*

Compound Spirit of Scurvy Grass.

℞. Fresh scurvy grass, cut, thirty parts.
Fresh horseradish, cut, four parts.
Alcohol, sp. gr. 0.864, thirty-five parts.

Macerate and distil thirty parts.
Paris Codex.

Used in gargles, and internally in doses of twenty to sixty minims, in an appropriate liquid.

Gargle of Scurvy Grass.

℞. Spirit of scurvy grass, one drachm.
Syrup of Peruvian bark, half an ounce.
Infusion of water cress, eight ounces.

Mix. As a gargle in scurvy. *Foy.*

CODEIA.

Codeia.

An alkaloid obtained from opium, and bearing the same relation to morphia that cinchonia does to quinia. It is precipitated by tannin, and is soluble in ether, alcohol, and eighty parts of water, but is not thrown down from a dilute solution of its salts by ammonia. It acts somewhat like morphia, but is said to produce itching of the skin. Dose, half a grain to two grains.

Codeia.

℞. Mother-water of morphia (by Gregory's process), at will.

Evaporate and crystallize; dissolve the crystals, and recrystallize. Treat with solution of potassa, which dissolves the morphia and precipitates the codeia; wash the latter with a little water, dissolve in hot ether, add a little water, and suffer the solution to evaporate spontaneously.
Paris Codex.

Syrup of Codeia.

℞. Codeia, twelve grains.
Distilled water, thirty-four drachms.
Sugar, sixty-six drachms.

Dissolve codeia in water by aid of heat, then add sugar and dissolve. *Paris Codex.*

A teaspoonful contains one-sixth, a tablespoonful nearly two-thirds of a grain.

Dose, a teaspoonful night and morning, gradually increased in neuralgic irritation of the stomach, hooping-cough, etc.

Muriate of Morphia and Codeia.

℞. Opium, at will.

Treat with water, add a strong solution of chloride of calcium, filter with animal charcoal, evaporate, and crystallize.
Magendie.

Dose, half a grain to a grain.

COFFEA.

Coffee.

Coffee is the product, principally, of *Coffea Arabica*, a small tree, native of the eastern coast of Africa, but now cultivated in most tropical regions. The varieties are very numerous, and in some cases probably are derived from other species.

Sex. Syst. Pentand. monog. *Nat. Syst.* Cinchonaceæ.

Linn. Sp. Pl. 245. Griffith, Med. Bot. 361.

Raw coffee has febrifuge properties, and has been used with success in the treatment of intermittents. In a roasted state it acts on the nervous system, producing wakefulness, and also somewhat excites the circulatory system. It is said to be useful in periodic asthma, and is an efficient antiemetic. Its active principle, *caffeina*, is crystallizable.

Decoction of Raw Coffee.

℞. Raw coffee, one ounce.
Water, eighteen fl. ounces.

Boil to two-thirds, strain, and add

Lemon juice, two fl. ounces.

To be taken warm, during the apyrexia.
Foy.

Vinegar of Coffee.

℞. Roasted coffee, ground, three ounces.
Vinegar, twelve ounces.

Boil, strain, and add

Sugar, one ounce and a half.

Two spoonfuls occasionally, in poisoning by opium, after the evacuation of the poison.
Pierquin.

Syrup of Coffee.

℞. Coffee, roasted, four ounces.
Water, two pints.
Refined sugar, three pounds.

Infuse the coffee in a pint and a half of the water for six hours, boil in a water-bath, let settle, decant, and add remainder of the water. Let stand for some hours; decant, add sugar, form syrup, and strain. Dose, from one ounce to two. *Ferrari.*

COFFEINA.

CAFFEINA.

Hypodermic Injection of Caffeina.

℞ Caffeina, six grains.
Alcohol,
Distilled water, each, one fl. drachm.

Dissolve the caffeina in the alcohol and add the water. Used hypodermically in neuralgia in doses of five or ten minims, containing one-fourth or one-half of a grain of caffeina; and in opium narcosis in the dose of twenty minims, containing one grain of caffeina. *Eulenburg.*

Citrate of Caffeina.

℞ Caffeina, at will.
Solution of citric acid, sufficient

to saturate. Dissolve at a temperature of 212° F., evaporate, and crystallize.

This salt is very soluble. Dose, one to three grains.

Pills of Citrate of Caffeina.

℞ Citrate of caffeina, eight grains.
Extract of dog grass,
(Triticum repens), fifteen grains.

Mix, and divide into ten pills. Dose, one pill every two hours in sick headache.
Hannon.

Syrup of Citrate of Caffeina.

℞ Citrate of caffeina, five drachms.
Simple syrup, eight fl. ounces.

Dissolve.

Dose, a teaspoonful every two hours, in sick headache. *Hannon.*

COLCHICUM.

COLCHICUM.

The *Colchicum autumnale*, or meadow saffron, is a bulbous plant, a native of most parts of Europe, flowering in the autumn, and putting forth its leaves and perfecting its seed the succeeding spring.

Sex. Syst. Hexand. monog. *Nat. Syst.* Melanthaceæ.

Linn. Sp. Pl. 485. Griffith, Med. Bot. 644.

The parts used are the corm and the seeds. The first is of a brown color externally, white within, rounded on one side, concave on the other, of scarcely any smell, but an acrid, bitter taste; the seeds are small, rounded, of a brownish-yellow color, and of the same taste as the bulb. They owe their properties to the presence of colchicia.

Colchicum is principally used in the various forms of gout and rheumatism. It is an active irritant, and in large doses, acro-narcotic. The dose of the powdered bulb is two to eight grains, every four or six hours; that of the seeds much the same.

Extract of Colchicum.

℞ Fresh colchicum bulb, at will.

Bruise in a stone mortar, express juice, decant, heat to boiling, strain, and evaporate to proper consistence. *Brit. Ph.*

Dose, one or two grains.

Acetic Extract of Colchicum.

℞ Fresh colchicum corm, seven pounds (avoir.).
Acetic acid, six fl. ounces.

Bruise, gradually adding acid, express, decant, heat to boiling, strain, and evaporate, below 160°, to proper consistence.
Brit. Ph.

℞ Colchicum root, in powder,
No. 50, twelve troyounces.
Acetic acid, four fl. ounces.
Water, a sufficient quantity.

Mix the acid with a pint of water, and pour on the root. Transfer to a percolator, and add water until the liquid passes tasteless. Then evaporate to proper consistence.
U. S. Ph.

Dose, one to two grains, two or three times a day.

Alcoholic Extract of Colchicum Root.

℞ Colchicum root, in
powder, one part.
Alcohol, sp. gr. 0.914, six parts.

Macerate in a percolator for twelve hours, displace, adding finally water, until a turbidity is produced in the tincture; distil this, and evaporate to proper consistence.
Paris Codex.

Dose, one to two grains.

Extract of Colchicum Seed.

℞ Powdered colchicum
seed, one part.
Alcohol, sp. gr. 0.914, three parts.

Digest for several hours, and express; repeat operation with same quantity of alcohol, filter the mixed tinctures, distil and evaporate to an extract; dissolve in four

times its weight of cold water, filter, and evaporate to proper consistence.
Paris Codex.

Dose, one-half to one grain.

Colchicum Pills.

℞. Acetic extract of colchicum, fifteen grains.
Marshmallow root, sufficient.

Make ten pills. Dose, one to five a day until purgative effect is produced.
Scudamore.

Compound Colchicum Pills.

℞. Acetic extract of colchicum, three grains.
Dover's powder,
Compound extract of colocynth, each, one grain.

Mix, and make a pill. In gout, after having taken, for some days, thirty to forty drops of colchicum wine, morning and evening.
Halford.

Lartigue's Pills.

℞. Extract of colchicum root, two grains.
Extract of foxglove, one grain.
" col. comp., twenty grs.

Mix, and form five pills. One at night, in gout.
Lartigues.

Wine of Colchicum Root.

℞. Colchicum root, bruised, twelve troyounces.
Sherry wine, sufficient.

Displace two pints. *U. S. Ph.*

Wine of colchicum of *Brit. Ph.* is about one-half this strength.

Wine of Colchicum Seed.

℞. Colchicum seed, in powder, No. 40, four troyounces.
Sherry wine, two pints.

Macerate for seven days, express, and filter.
U. S. Ph.

Wine of colchicum, *Germ. Ph.*, is about four-fifths this strength.

The dose of the first, which is a saturated wine of the root, is from ten drops to half a fl. drachm; for the second, half to one fl. drachm.

℞. Colchicum seed, bruised, three ounces.
Sherry wine, deprived of its spirit by evaporation, two pints.

Macerate for six days, and filter. *Taddei.*

This is said to be the formula of the *Eau medicinale of Husson.*

Tincture of Colchicum Seed.

℞. Colchicum seed, in powder, No. 50, four troyounces.
Diluted alcohol, sufficient.

Displace slowly two pints. *U. S. Ph.*

Tincture of *Brit. Ph.* is of about same strength.

℞. Colchicum seed, bruised, one part.
Alcohol, sp. gr. .892, ten parts.

Digest for eight days, and filter.
Ph. Germ.

Dose from half to one fl. drachm. Sometimes used as an embrocation in gout, rheumatism, and neuralgia.

Ethereal Tincture of Colchicum Seed.

℞. Colchicum seed, bruised, four ounces.
Spirit of nitrous ether, two pints.

Digest for ten days and filter. The advantage claimed for this preparation is a greater tendency to act on the kidneys.

Dose, twenty to thirty drops. *Mettauer.*

Compound Tincture of Colchicum Seed.

℞. Colchicum seed, bruised, five ounces.
Aromatic spirit of ammonia, two pints.

Macerate for seven days, express, and filter.
Lond. Ph.

More stimulating than the last. Dose, thirty drops to a fl. drachm.

Tincture of Colchicum Flowers.

℞. Dried colchicum flowers, one ounce.
Diluted alcohol, one pint.

Macerate for eight days, express, and filter. Advised in acute rheumatism. *Bushell.*

Tincture of Colchicum Root.

℞. Colchicum root, bruised, one part.
Alcohol, sp. gr. 0.914, five parts.

Macerate for ten days, express, and filter.
Paris Codex.

Dose, half to one fl. drachm.

Vinegar of Colchicum Root.

℞. Dried colchicum root, one part.
White vinegar, twelve parts.

Macerate for eight days, express, and filter. *Paris Codex.*

As a diuretic in dropsy; also given in gout, rheumatism, etc. Dose, thirty drops to two fl. drachms.

Oxymel of Colchicum.

℞. Vinegar of colchicum root, one part.
Honey, four parts.

Boil to sp. gr. 1.26, clarify with paper pulp, and strain. *Paris Codex.*

℞. Vinegar of colchicum seed, one part.
Clarified honey, two parts.

Mix, evaporate to two parts, and strain. *Ph. Germ.*

Vinegar of Colchicum Seed.

℞. Colchicum seed, one part.
Distilled vinegar, four parts.

Macerate a month, and filter. *Béral.*

℞. Bruised colchicum seed, one part.
Alcohol, one part.
Dilute acetic acid, nine parts.

Digest for eight days, express, and filter. *Ph. Germ.*

Syrup of Colchicum.

℞. Vinegar of colchicum root, sixteen parts.
Sugar, twenty-six parts.

Boil by a gentle fire. *Swediaur.*

Fluid Extract of Colchicum Root.

℞. Colchicum root, in powder, No. 50, sixteen troyounces.
Glycerin, three fl. ounces.
Alcohol, twelve fl. ounces.
Water, one fl. ounce.

Moisten colchicum with five fl. ounces of mixed liquids, pack into porcolator, add remainder of mixture, and macerate four days then displace with diluted alcohol twenty-four fl. ounces; reserve the first fourteen fl. ounces, add to remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, two to ten minims.

Fluid extract of colchicum seed is prepared in same manner from colchicum seed in powder, No. 60.

Mixture of Colchicum and Magnesia.

℞. Magnesia, one drachm.
Sugar,
Gum Arabic, each, sufficient.
Distilled water, four fl. ounces.
Wine of colchicum root, forty drops.

Mix. A tablespoonful every two hours, till it operates. In gout and rheumatism. *Ellis.*

℞. Wine of colchicum root, half fl. drachm.
Carbonate of magnesium, one drachm.
Cinnamon water,
Distilled water, each, three fl. ounces.

Mix. A tablespoonful three times a day. As a diuretic. *Ellis.*

Mixture of Colchicum and Sulphate of Magnesium. (Scudamore's Mixture.)

℞. Sulphate of magnesium, one to two ounces.
Mint water, ten fl. ounces.
Vinegar of colchicum,
Syrup of saffron, each, one fl. ounce.
Magnesia, eight scruples.

Mix. Dose, one to three tablespoonfuls, every two hours, till four to six evacuations are procured in the twenty-four hours. In gout. *Scudamore.*

Compound Wine of Colchicum.

℞. Tincture of colchicum seed, one scruple to half a fl. drachm.
Wine of colchicum seed, half a fl. ounce.

Mix. Fifteen to forty drops, three times a day. *Weber.*

Wine of Colchicum and Opium.

℞. Wine of colchicum seed, three drachms.
Sydenham's laudanum, half a drachm.

Mix. Dose, twenty to thirty drops every three or four hours. *Eisenmann.*

Tincture of Colchicum Mixture.

℞. Tincture of colchicum seed,
" guaiacum, each, three fl. drachms.

Mix. Thirty to forty drops, three times a day, in chronic rheumatism. *Radius.*

Tincture of Colchicum and Digitalis.

℞. Tincture of colchicum seed,
" digitalis, each,
two fl. drachms.
Nitrous ether, one scruple.

Mix. Twenty drops, morning and evening, on sugar, in hydrothorax. *Hildebrand.*

Colchicum Mixture.

℞. Wine of colchicum seeds,
thirty drops.
Denarcotized laudanum, twenty-five drops.
Sugar, thirty grains.
Water, one fl. ounce.

Mix. Found useful in acute rheumatism. To be taken at night. *Dewees.*

℞. Wine of colchicum seed,
forty drops.
Acetated tincture of opium, twenty drops.
Sugar, thirty grains.
Water, one fl. ounce.

Mix. In gout, after inflammation is allayed. To be taken at bedtime. *Dewees.*

℞. Iodide of potassium,
Carbonate of ammonium,
each, one scruple.
Wine of colchicum seed, one fl. drachm.
Tincture of squill,
" hyoscyamus,
each, two fl. drachms.
Camphor water, sufficient for three fl. ounces.

Mix. A tablespoonful, three times a day, in gouty bronchitis. *Greenhow.*

Preserved Juice of Colchicum Flowers.

℞. Expressed juice of colchicum flowers, two parts.
Brandy, one part.

Mix, and let rest for a few days; decant, and keep for use in well-stopped bottles. *Wilson.*

Said to be identical in every respect to the *Eau medicinale de Husson.*

Mixture of Colchicum and Elaterium.

℞. Elaterium, one grain.
Spirit of nitrous ether, two fl. ozs.
Tincture of squill,
Oxymel of colchicum,
each, half a fl. ounce.
Syrup, one fl. ounce.

Mix. A teaspoonful, three or four times a day, in hydrothorax. *Ferriar.*

Vinegar of Colchicum Mixture.

℞. Vinegar of colchicum,
Syrup, each, half a fl. ounce.
Carbonate of magnesium,
one drachm and a half.
Peppermint water, four ounces.

Mix. In tablespoonful doses, as a sudorific in gout, etc. *Foy.*

Mixture of Colchicum and Squill.

℞. Oxymel of colchicum, } each,
" squill, } half fl.
Wine of tobacco, } ounce.

Mix. A teaspoonful four times a day. As a diuretic in dropsy. Requires caution. *Ferriar.*

Mixture of Colchicum and Ammonia.

℞. Oxymel of colchicum,
Solution acetate of ammonium,
each, two fl. ounces.
Parsley water, six fl. ounces.

Mix. A spoonful, every two hours, as a diuretic. *Augustin.*

Liniment of Colchicum and Camphor.

℞. Tincture of colchicum root,
" camphor,
each, three fl. ounces.

Mix. As an embrocation, in gout, rheumatism, and neuralgia. *Leycock.*

COLLINSONIA.

Horse-Balm.

The *Collinsonia Canadensis* is a native plant, found in most parts of this country, in woods; it is from two to three feet in height.

Sex. Syst. Diand. monog. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 39. Griffith, Med. Bot. 513.

The whole plant has a strong, peculiar, unpleasant odor, and a warm, pungent taste: these are most developed in the root; this is knotty and hard. It is diuretic, diaphoretic, and tonic; and is popularly used in diseases of the bladder, leucorrhœa, and dropsy, and externally as a fomentation to wounds, ulcers, etc.

Decoction of Horse-Balm.

℞. Horse-balm root, bruised, two ounces.
Water, two pints.

Boil for half an hour, and strain. Dose, a wineglassful, every two hours, in dropsy.

Tincture of Horse-Balm.

℞. Bruised horse-balm root, two ounces.
Diluted alcohol, one pint.

Macerate for fourteen days, express, and filter. Dose, a teaspoonful.

Oil of Horse-Balm.

℞. Horse-balm, at will.
Water, sufficient.

Distil, return product, and redistil, separate oil. Dose, five to ten drops.

COLLODIUM.

See GOSSYPIUM.

Carbolic Collodion.

℞. Collodion, one hundred parts.
Carbolic acid, ten parts.
Tannic acid, five parts.
Benzoic acid, three parts.

Dissolve. *Maryland Coll. Ph.*

COLOCYNTHIS.

COLOCYNTH.

Colocynth is the dried pulp of the fruit of *Citrullus colocynthis*, a cucurbitaceous vine found in many parts of Asia and Africa. The fruit is a round pepo, of the size and color of an orange, with a thin, but hard rind, and containing numerous seeds, enveloped in a white, spongy pulp.

Sex. Syst. Monœc. monadelph. *Nat. Syst.* Cucurbitaceæ.

Royle, Mat. Med. 396. Griffith, Med. Bot. 306.

It occurs in the shops in white, round, light balls, composed of a spongy, dried pulp, inclosing numerous seeds. This spongy substance has a faint odor, but an intensely bitter and nauseous taste. It is a powerful drastic and hydragogue purgative, and is seldom given alone. Dose, five to ten grains.

Prepared Colocynth.

℞. Colocynth, deprived of seeds, and cut fine, five parts.
Powdered gum Arabic, one part.

Beat with sufficient distilled water into a paste, dry and reduce to a fine powder. Dose, five grains. *Ph. Germ.*

Powder of Colocynth.

℞. Colocynth, one to three grains.
Gum Arabic, Liquorice, Sugar, } each, five grains.

Mix. As a hydragogue purgative. *Augustin.*

Extract of Colocynth.

℞. Colocynth pulp in coarse powder, forty-eight troyounces.
Diluted alcohol, sufficient.

Macerate with eight pints of the alcohol for four days, express strongly, and strain; break up residue, pack in percolator, and displace to obtain altogether sixteen pints, distil off ten pints, evaporate residue to dryness, and powder. Yield about seven troyounces. *U. S. Ph.*

Paris Codex and *Ph. Germ.* prepare this extract by maceration and digestion. Dose, half to one grain.

Compound Extract of Colocynth.

℞. Extract of colocynth, three troyounces and a half.
Purified aloes, twelve troyounces.
Resin of scammony, three troyounces.
Cardamom, one troyounce and a half.
Soap, three troyounces.

All the ingredients in fine powder. Mix thoroughly. *U. S. Ph.*

By fusing the ingredients together with a little alcohol, drying, and powdering afterwards, as proposed by D. Squibb, the preparation is uniform in appearance.

℞. Colocynth sliced, six ounces.
Extract of Socotrine aloes, twelve ounces.
Resin of scammony, four ounces.
Powdered cardamom, one ounce.
Hard soap, three ounces.
Alcohol, sp. gr. 0.920, one gallon.

Macerate the colocynth in the alcohol for four days, express, and distil spirit; then add the aloes, scammony, and soap; evaporate to proper consistence, and add the cardamom. *Brit. Ph.*

℞. Extract of colocynth, three parts.
Powdered aloes, ten parts.

Resin of scammony, eight parts.
Extract of rhubard, five parts.

Mix, adding some alcohol, dry with gentle heat, and powder. *Ph. Germ.*

A valuable and safe cathartic. In small doses, laxative. Dose, five to twenty grains.

Compound Cathartic Pills. (Antibilious Pills.)

℞. Compound extract of colocynth, thirty-two grains.
Extract of jalap, in powder,
Calomel, each, twenty-four grains.
Gamboge, in powder, six grains.

Mix, and with water form mass, to be divided into twenty-four pills. *U. S. Ph*

A most excellent cathartic, when it is wished to act on biliary organs. Dose, one to three or four pills. Each pill contains one grain of calomel.

Compound Pills of Colocynth.

℞. Colocynth pulp, } each, two
Barbadoes aloes, } drachms and
Scammony, } a half.
Honey, seven drachms and a half.
Oil of cloves, two drops.

Mix, and make two hundred pills. *Paris Codex.*

℞. Barbadoes aloes,
Scammony, each, two ounces (avoir.).
Colocynth pulp, one ounce "
Sulphate of potassium, quarter ounce (avoir.).
Oil of cloves, two fl. drachms.

Beat well together, and with water form a mass. *Brit. Ph.*

Dose, five to ten grains.

℞. Compound extract of colocynth, one scruple.
Resin of jalap, six grains.
Compound powder of scammony,
Calomel, each, ten grains.
Tartar emetic, one grain.
Castile soap, five grains.
Oil of cinnamon, four drops.

Beat well together, and form fifteen pills. Dose, one to three, at bedtime. *Meigs.*

℞. Extract of colocynth, two drachms.
Resin of jalap, one drachm.
Soap. one drachm and a half.
Guaiacum, three drachms.
Tartar emetic, eight grains.
Oil of juniper,
" rosemary, each, four drops.
Syrup of buckthorn, sufficient.

Mix well, and divide into four grain pills. Dose, one to three. *Barclay.*

℞. Compound extract of colocynth, forty grains.
Compound rhubarb pill, twenty grains.
Soap, six grains.
Oil of cloves, four drops.

Mix, and form sixteen pills. Dose, one at bedtime. *James Johnson.*

Pills of Colocynth and Henbane.

℞. Compound pill of colocynth, two parts.
Extract of hyoscyamus, one part.

Beat into a uniform mass. *Brit. Ph.*

Dose, five to ten grains.

Colocynth Clyster.

℞. Extract of colocynth, one scruple.
Common salt, three drachms.
Syrup of dogtooth-grass, one ounce and a half.
Infusion of chamomile, five ounces.

In cerebral affections. *Phœbus.*

Colocynth Mixture.

℞. Colocynth, one drachm.
Boiling water, six ounces.

Boil for ten minutes, strain, and add, when cold,

Hoffmann's anodyne, one drachm.
Syrup of orange-peel, one ounce.

Mix. A spoonful, three times a day, in ascites, or hydrothorax. *Augustin.*

Tincture of Colocynth.

℞. Colocynth pulp, one part.
Alcohol, ten parts.

Macerate for eight days, express, and filter. Dose, five to fifteen grains. *Ph. Germ.*

The tincture of *Paris Codex* is twice this strength, and is made with alcohol, sp. gr. 0.914.

℞. Colocynth, eight parts.
Star anise, one part.
Alcohol, ninety-six parts.

Macerate for three days, and filter. Dose, fifteen to twenty drops. *Van Mons.*

Tincture of Colocynth Mixture.

℞. Tincture of colocynth, two drachms.
Solution of antimoniated soap (*Cod. Hamb.*), six drachms.

Mix. Dose, twenty to thirty drops a day, in lepra and obstinate cutaneous affections. *Heim.*

COMPTONIA.

Sweet Fern.

A shrubby, indigenous plant, found in the Northern and Middle States.

Sex. Syst. Monœc. triand. *Nat. Syst.* Myricaceæ.

Aiton, Hort. Kev. iii. 334. Griffith, Med. Bot. 584.

It is aromatic, especially when bruised. It is a mild astringent, and is used in bowel complaints, in the form of decoction.

CONIUM.

Hemlock.

This is an umbelliferous, poisonous plant, the *Conium maculatum*, a native of Europe, but naturalized in many parts of this country, growing in waste places.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Linn. Sp. Pl. 349. Griffith, Med. Bot. 339.

Both the fruit and the leaves are used. The latter have a strong, unpleasant, narcotic odor, and a somewhat bitterish taste; the nearly ripe fruit possesses similar qualities, and is more reliable. They are both narcotic, but neither stimulant nor sedative, and are given in a variety of complaints, to alleviate, especially in malignant tumors, in which they are thought to exert a curative influence. The dose, in powder, is from three to eight grains of the leaves, and of the fruit rather less, twice a day, gradually increasing. The active principle, *conia*, is seldom used.

Powder of Hemlock.

℞. Powdered hemlock, five grains.
" liquorice, six grains.

Make a powder, to be taken three times a day. In scirrhous affections, scrofula, old ulcers, etc.

Extract of Hemlock.

℞. Fresh hemlock leaves, twelve troyounces.

Bruise in a stone mortar, sprinkling on them a little water; express the juice, heat to boiling point, strain, and evaporate to proper consistence, either in a vacuum or in shallow vessels by means of a current of air. *U. S. Ph.*

Paris Codex operates the same, but strains the cold concentrated liquid previous to final inspissation. *Brit. Ph.*, before removing albumen at 200°, separates chlorophyll at 130°, and adds it again to extract. *Ph. Germ.* removes chlorophyll and albumen by coagulation, and from the concentrated juice, mucilage by alcohol.

Dose, two grains, gradually increased until it affects the system.

Alcoholic Extract of Hemlock.

℞. Hemlock leaves, in powder, No. 60, twelve troy-ounces.
Alcohol, one pint.

Moisten powder with one-third of the alcohol, pack in percolator, and add remainder of alcohol; when this has been absorbed, add diluted alcohol, until powder is exhausted. Evaporate the first pint of tincture spontaneously to three fl. ounces; evaporate remainder by water-bath below 160° to syrupy consistence, mix with other portion, and evaporate below 120° to proper consistence. *U. S. Ph.*

Paris Codex displaces one part of conium with six parts of alcohol, sp. gr. 0.914, afterwards with water until turbidity appears, distils, and evaporates.

Dose, one to two grains, gradually increasing.

Pills of Hemlock and Ipecacuanha.

℞. Extract of hemlock,
Dover's powder, each, ten grains.

Mix, and form five pills. Two at bedtime, in pulmonary irritation, with rheumatic and other local pains. *Ellis.*

℞. Extract of hemlock, five drachms.
Powdered ipecacuanha, one drachm.
Molasses, sufficient.

Mix. Dose, five to ten grains. *Brit. Ph.*

Pills of Hemlock and Calomel.

℞. Extract of hemlock, two scruples.
Calomel, fifteen grains.

Mix, and form fifteen pills. One, three times a day, in syphiloid affections. *Ellis.*

Pills of Hemlock and Dandelion.

℞. Extract of hemlock, " dandelion, each, one drachm.
Gum Arabic,
Soap,
Honey, sufficient.

Mix, and form three grain pills. In glandular and other tumors. *Brera.*

Infusion of Hemlock.

℞ Hemlock leaves, half an ounce.
Boiling water, one pint.

Infuse, and strain. As a wash to cancerous and malignant ulcers. *Ellis.*

Inhalation of Hemlock.

℞ Extract of hemlock, sixty grains.
Solution of potassa, one fl. drachm.
Distilled water, ten fl. drachms.

Mix. Put twenty minims of the mixture on a sponge in a suitable apparatus, so that the vapor of hot water passing over it may be inhaled. *Brit. Ph.*

Hemlock Collutory.

℞ Hemlock leaves, two drachms.
Poppy seed, one drachm.
Henbane seed, half a drachm.
Milk, half a pint.

Boil slightly, and strain. In rheumatic toothache. *Phœbus.*

Juice of Hemlock.

℞ Fresh hemlock leaves, at will.

Bruise, express, and add to every three measures of juice one measure of alcohol, and after a week, filter. *Brit. Ph.*

The *U. S. Ph.* adds one measure of alcohol to every five measures of the juice. Dose, half to one teaspoonful and more.

Tincture of Hemlock.

℞ Hemlock leaves, four troyounces.
Diluted alcohol, sufficient.

Obtain by displacement two pints of tincture. *U. S. Ph.*

Paris Codex obtains, with alcohol sp. gr. 0.914, twenty troyounces of tincture.

℞ Hemlock fruit, two and a half ounces (avoir.).
Alcohol, sp. gr. 0.920, sufficient.

Obtain one pint (imperial) of tincture. *Brit. Ph.*

Dose, thirty drops to a fl. drachm and more.

Ethereal Tincture of Hemlock.

℞ Hemlock leaves, one part.
Sulphuric ether, four parts.

Macerate for two days, and filter. *Soubeiran.*

Fluid Extract of Conium Fruit.

℞ Conium fruit, in powder, No. 60, sixteen troyounces.
Glycerin, three fl. ounces.
Alcohol, eight fl. ounces.
Water, five fl. ounces.

Moisten powder with four fl. ounces of mixed liquids, pack into percolator, and add remainder. Macerate for four days, then displace with diluted alcohol until twenty-four fl. ounces are obtained, reserving the first fourteen fl. ounces; add to remainder

Muriatic acid, three drachms.
Glycerin, one fl. ounce.

Evaporate to two fl. ounces, mix with reserved portion, and strain. *U. S. Ph.*

Ointment of Conium.

℞ Extract of conium, one part.
Lard, nine parts.

Soften extract with a little water, and mix thoroughly. *Ph. Germ.*

As a dressing to painful ulcers.

Compound Balsamic Conium Ointment.

℞ Acetate of lead, in very fine powder, two parts.
Extract of conium, six parts.
Simple cerate, forty-eight parts.
Balsam of Peru, six parts.
Sydenham's laudanum, one part.

Mix thoroughly. *Hellmund's narcotico-balsamic ointment.* *Ph. Germ.*

Oleo-infusion of Hemlock.

℞ Fresh hemlock, one part.
Olive oil, two parts.

Simmer together until moisture has evaporated, express, and strain. As a friction to the abdomen in ileus, and to the anus in hemorrhoids. *Paris Codex.*

Conium Plaster.

℞ Elemi, purified, two parts.
White wax, one part.

Melt together, and add

Alcoholic extract of conium, nine parts.

As an application to painful ulcers and malignant tumors. *Paris Codex.*

℞ Yellow wax, four parts.
Common turpentine,
Olive oil, each, one part.

Melt together, and when nearly cold, add

Powdered conium, two parts.

Stir well till cold. *Ph. Germ.*

Compound Conium Plaster.

℞. White turpentine, nineteen scruples.
Yellow wax, thirteen scruples.
Burgundy pitch, nine scruples.
Oleo-infusion of hemlock, fifty-two grains.

Melt together, and add to melted mixture

Fresh hemlock, forty scruples.

After evaporation of moisture, express, melt again, and add

Ammoniac, purified, ten scruples.

Stir well till cold. Used as above. *Paris Codex.*

℞. Powdered ammoniac,
Vinegar of squill, each, two parts.

Digest and evaporate with a gentle heat to a soft mass, and mix well with

Conium plaster, nine parts. *Ph. Germ.*

℞. Soap plaster, one ounce.
Extract of hemlock, half an ounce.
Powdered belladonna, two drachms.

Mix. *Hamburg Codex.*

Cataplasm of Conium.

℞. Powdered conium, one ounce.
Linseed meal, three ounces.
Boiling water, ten fl. ounces.

Mix with constant stirring. *Brit. Ph.*

℞. Powdered hemlock, two ounces.
Carrot juice, one pound.
Tincture of opium and saffron, three drachms.
Linseed meal, sufficient.

Make a cataplasm. In cancerous ulcers. *Pideret.*

Mixture of Hemlock and Paregoric.

℞. Extract of hemlock, one drachm.
Paregoric elixir,
Syrup of tolu, each, half fl. ounce.
Rose water, four fl. ounces.

Mix. From half to a teaspoonful once in four hours, to a child a year old, watching the effect, in pertussis. *Pearson.*

Suppository of Hemlock.

℞. Extract of hemlock,
White wax, each, ten grains.
Butter of cacao, forty grains.

Mix. In painful hemorrhoids and spasms of the rectum. *Béral.*

Embrocation of Conia.

℞. Conia, two parts.
Distilled water, two hundred parts.
Alcohol, thirteen parts.

Mix. Used in scrofulous ophthalmia, and intolerance of light, by frictions around the orbits several times a day. *Fronmüller.*

℞. Conia, one grain.
Expressed oil of almonds, two drachms.

Mix. Used like preceding. *Mauthner.*

Hypodermical Injection of Conia.

℞. Conia, half a grain.
Alcohol, half a drachm.

Dissolve and add it gradually to

Distilled water, one drachm and a half.

Used in doses of two to five minims, containing $\frac{1}{120}$ to $\frac{1}{48}$ conia, in asthma, tetanus, etc. *Eulenburg.*

CONTRAYERVA.

Contrayerva.

Contrayerva is the root of *Dorstenia contrayerva*, and other species, all natives of South America, Mexico, and the West Indies. They are perennial, dwarf, herbaceous plants, usually growing in high, rocky places.

Sex. Syst. Tetrand. monog. *Nat. Syst.* Moraceæ.

Linn. Sp. Pl. 124. Griffith, Med. Bot. 577.

The root is oblong, hard, rough, and solid, of a reddish-brown color, with numerous, long, yellowish fibres. It has an aromatic odor, and a warm, pungent, somewhat bitterish taste. It is a stimulant, tonic, and diaphoretic, and has been found useful in low states of the system. The dose of the powder is about half a drachm.

Compound Powder of Contrayerva.

℞. Powdered contrayerva, six drachms.
Virginia snakeroot, two drachms.
Prepared chalk, one ounce.

Mix. Dose, a teaspoonful two or three times a day, as a tonic. *Spielmann.*

Extract of Contrayerva.

℞ Contrayerva, bruised, one part.
Boiling water, six parts.

Infuse for three days, boil, strain, express, and evaporate to proper consistence. Dose, one to two scruples. *Palat. Codex.*

Decoction of Contrayerva.

℞ Contrayerva, bruised, one drachm.
Water, one pint.

Boil for ten minutes, and strain. *Taddei.*

Gargle of Contrayerva.

℞ Contrayerva, half an ounce.
Figs, one ounce.
Water, eighteen fl. ounces.

Mix, and boil down to two-thirds.
Saunders.

Tincture of Contrayerva.

℞ Contrayerva, one part.
Alcohol, sp. gr. 0.864, sufficient.

Obtain by displacement five parts of tincture. Dose, thirty to forty drops.
Dorvault.

Compound Tincture of Contrayerva.

℞ Contrayerva,
Virginia snakeroot,
each, one ounce and a half.
Juniper berries, one ounce.
Spirit of ammonia, six fl. ounces.
Alcohol, one pint.

Macerate for four days, express, and filter. Dose, forty to eighty drops, as a stimulating diaphoretic. *Lip. Dis.*

Contrayerva Mixture.

℞ Powdered contrayerva, eight grains.
Cinnamon water, one fl. ounce and a half.
Nutmeg water, two fl. drachms.
Syrup of cinnamon, three fl. drachms.

Mix. A spoonful as a stomachic.
Swediaur.

CONVOLVULUS PANDURATUS.

Wild Potato.

This is a native plant, with a large perennial root, found in sandy soils in most parts of the United States.

Sex. Syst. Pentand. monog. *Nat. Syst.* Convolvulaceæ.

Linn. Sp. Pl. 219. Griffith, Med. Bot. (Ipomæa) 476.

The root, as found in the shops, is in circular pieces, of a yellowish-brown color, scarcely any smell, and a bitterish, somewhat acrid taste. It is feebly cathartic, but is said to be a good diuretic in calculous complaints. Dose, as purgative, forty grains. As a diuretic, it is given in decoction.

COPAIBA.

Copaiba.—Copaiva.

This is the oleoresin of *Copaifera multijuga* and other species, all large trees, natives of South America, and principally of Brazil.

Sex. Syst. Decand. monog. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 557. Griffith, Med. Bot. 264.

Copaiba is clear and transparent, of a pale yellowish color, a peculiar and somewhat unpleasant odor, and a bitterish, pungent, nauseous taste. It is rather less consistent than olive oil when fresh, but by age becomes thicker, and may even assume the solidity of a resin. It is stimulant, diuretic, and cathartic, and is principally used in morbid discharges from mucous surfaces, especially those of the genito-urinary organs. The dose is from twenty drops to a fl. drachm, three times a day.

Boluses of Copaiba.

℞ Copaiba, two drachms.
Gum Arabic, one ounce.
Powdered liquorice, sufficient.

Mix, and form mass. Dose, a scruple to two scruples. *Radius.*

℞ Copaiba, one ounce.
Calcined magnesia, one drachm.
Opium, four grains.
Powdered cubebs, three drachms.
Syrup of poppies, sufficient.

Mix, and divide into boluses of half a drachm. Two to be taken at night, in gonorrhœa. *Henschel.*

Pills of Copaiba.

℞ Copaiba, two troyounces.
Magnesia (freshly prepared), one drachm.

Mix, and set aside till it concretes into a pilular mass; this to be divided into two hundred pills. Should the mixture not concrete in eight or ten hours, a deficiency of water in the copaiba may be inferred; and this difficulty may be obviated in subsequent operations by shaking the copaiba with one-twentieth of its weight of water,

allowing to stand for some days, and decanting from the uncombined water. *U. S. Ph.*

Dose, two to six, two or three times a day.

℞. Copaiba, one ounce.
Dragon's blood, half an ounce.
Calomel, one drachm.
Conserve of roses, four ounces.

Mix, and make pills of six grains. Dose, from three to five a day. *Foy.*

Pills of Copaiba and Cubebs.

℞. White wax, two drachms.

Melt, by a gentle heat, and add

Copaiba, half an ounce.
Powdered cubebs, one ounce.

Incorporate well, and divide into two hundred and forty pills. *Berens.*

Pills of Copaiba, Cubebs, and Turpentine.

℞. Oil of copaiba,
" cubebs,
" turpentine,
each, one fl. drachm.
Magnesia, two drachms.

Mix, and form sixty pills.

This is said to be an excellent preparation. It was communicated by Mr. Procter, who is unacquainted with the author of it.

Copaiba Confection.

℞. Turpentine, one ounce.
Copaiba, half an ounce.

Mix well, in a warmed mortar, and add

Mucilage of gum Arabic, one ounce.
Conserve of roses, four ounces.

Dose, two to three drachms, three times a day, in obstinate gonorrhœa. *Swediaur.*

℞. Copaiba,
Powdered cubebs, each, four drachms and a half.
Yolk of egg, one.
Conserve of roses, half an ounce.

Mix. A teaspoonful three or four times a day. *Voght.*

℞. Copaiba,
Powdered cubebs, each, two ounces.
" alum, one ounce.
Opium, five grains.

Incorporate well. One drachm to be taken in the pulp of a prune, night and morning, and rapidly increased to two drachms. Is very effectual in gonorrhœa. *Berton.*

Emulsion of Copaiba.

℞. Copaiba,
Mucilage gum Arabic, each, two ounces.
Water, twelve fl. ounces.

Rub the copaiba gradually with the mucilage in a mortar, add the water by degrees, constantly rubbing. *Béral.*

Injection of Copaiba.

℞. Copaiba, twenty grains.
Carbonate of sodium, forty grains.
Wine of opium, fifteen drops.
Water, four ounces.

Mix well, adding the water gradually. As an injection in gonorrhœa. *Jennel.*

℞. Copaiba, two drachms.
Mucilage of gum Arabic, half an ounce.
Lime water, six fl. ounces.

Mix well. As an injection in ulcers of the rectum, vagina, or urethra. *Abernethy.*

℞. Copaiba, half an ounce.
Yolk of egg, sufficient.
Lime water, six ounces.
Honey of roses, three ounces.

Mix. As an injection in fistulous ulcers. *Plenck.*

Copaiba Mixture.

℞. Copaiba,
Sweet spirit of nitre, each, half a fl. ounce.
Powdered gum Arabic,
" sugar, each, one drachm.
Compound spirit of lavender, two fl. drachms.
Tincture of opium, one fl. drachm.
Distilled water, four fl. ounces.

Mix. A tablespoonful three times a day in gonorrhœa. *Chapman.*

℞. Copaiba, half an ounce.
Mint water, Alcohol, Syrup, } each, half a fl. ounce.
Sweet spirit of nitre, half a fl. drachm.

Mix. To be taken in four doses in a day, followed by demulcent drinks. In chronic gonorrhœa. *Ellis.*

℞ Copaiba, half an ounce.
Mucilage of gum Arabic, two ounces.
Clarified honey, six drachms.
Solution of potassa, two drachms.
Essence of lemon, half a drachm.
Rose water, five fl. ounces.

Mix. Two to three spoonfuls, three times a day. *Stephenson.*

℞ Copaiba, one drachm and a half.
Powdered kino, one scruple.
Mucilage of gum Arabic, two drachms.
Syrup of rhatany, one ounce.
Decoction of chamomile, four ounces.

Mix. A spoonful every hour or two. *Foy.*

℞ Copaiba, half a drachm.
Tincture of allspice,
Syrup of mallows, each, two drachms.
Mucilage of gum Arabic, sufficient.
Water, one ounce.

Mix. To be taken morning and evening. *Saunders.*

℞ Copaiba,
Syrup of lemon,
Mint water,
Orange-flower water, each, one ounce.
Diluted sulphuric acid, one drachm.
Tragacanth, sufficient.

Mix. A spoonful, morning and evening. *Delpech.*

℞ Copaiba,
Balsam of Tolu,
Powdered gum Arabic, each, half an ounce.
Elixir of vitriol, twenty drops.
Distilled water, six fl. ounces.

Mix. A tablespoonful, in chronic hooping-cough. *Ellis.*

℞ Copaiba, one drachm.
Carbonate of potassium, thirty grains.
Extract of Peruvian bark, twenty grains.
Gum Arabic, twelve grains.
Aloes, two grains.
Syrup of capillaire, two ounces.
Cinnamon water,
Mint water, each, three fl. ounces.

Mix. Dose, a wineglassful several times a day, as an anthelmintic. *Pierquin.*

Copahine-Mege.

℞ Oxidized copaiba, eighty parts.
Powdered cubebs,
Carbonate of sodium, each, eight parts.
Calcined magnesia, five parts.

Mix, and let the mixture stand till solidified, and then make into small masses, which are to be covered with sugar. Dose, four or five, three times a day. Oxidized copaiba is prepared by treating copaiba with nitric acid, and then washing with water. *Joseau.*

Mixture of Copaiba Resin.

℞ Resin of copaiba, three drachms.
Alcohol, five drachms.
Spirit of chloroform, one drachm.
Mucilage of acacia, two fl. ounces.
Water, sufficient to make twelve fl. ounces.

Mix. Recommended by Wilks as a diuretic preferable to copaiba emulsions. *Gerrard.*

Tincture of Copaiba.

℞ Copaiba, one part.
Alcohol, five parts.

Digest for several days, and filter. Dose, thirty to sixty drops. *Guibourt.*

Alkaline Tincture of Copaiba.

℞ Copaiba, one ounce.
Carbonate of potassium, one drachm.
Alcohol, four fl. ounces.

Digest, and filter. Dose, twenty-five to fifty drops. *Brunswick Ph.*

Compound Tincture of Copaiba.

℞ Copaiba, one ounce.
Guaiacum, two drachms.
Oil of sassafras, half a drachm.
Alcohol, four and a half fl. ounces.

Digest with a gentle heat; filter. *Foy.*
Dose, a drachm, in some infusion.

Oil of Copaiba.

℞ Copaiba, twelve troyounces.
Water, sixteen pints.

Distil twelve pints, separate oil, return water into still, and again distil; separate the oil. *U. S. Ph.*

As a carminative and stimulant. Dose, ten to thirty drops, rubbed up with muci-

lage and water. The residue in the still separated from the water is the *resin of copaiba.*

Copaiba Clyster.

℞. Copaiba, one to four drachms.
Extract of opium, one grain.
Yolk of egg, one.
Decoction of mallows, four to six fl. ounces.

Make an emulsion, as a clyster in gonorrhœa. *Guibourt.*

Copaiba Paste.

℞. Sweet almonds, six drachms.
Mallow paste, one drachm.
Catechu, half a drachm.
Copaiba, three drachms.

Rub together into a paste. Dose, a spoonful. *Phœbus.*

COPTIS.

GOLDTHREAD.

Coptis trifolia is a small evergreen plant, found in the more northern parts of both continents, in wet and boggy situations.

Sex. Syst. Polyand. polyg. *Nat. Syst.* Ranunculaceæ.

Salisbury, Linn. Trans. viii. 305. Griffith, Med. Bot. 87.

The roots are long, slender, orange-yellow, and the leaves are ternate with obovate sharply-toothed leaflets; the plant has no smell, but a strong and purely bitter taste. It is a simple tonic bitter, with no astringency, and contains two alkaloids, *berberina* and *coptina.* It is used as a stomachic, and as a local application to aphthous sore mouth. Dose, in powder, ten to thirty grains.

Infusion of Goldthread.

℞. Goldthread, one ounce.
Boiling water, one pint.

Infuse for an hour, and strain. Dose, half fl. ounce to two fl. ounces. *Dunglison.*

Tincture of Goldthread.

℞. Goldthread, one ounce.
Diluted alcohol, one pint.

Macerate for a week, and filter. Dose, one fl. drachm to three fl. drachms. *Wood.*

CORIANDRUM.

CORIANDER.

This is the fruit of *Coriandrum sativum,* an annual plant, a native of the south of Europe, but naturalized in many other parts of that quarter of the world, and also extensively cultivated.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Linn. Sp. Pl. 367. Griffith, Med. Bot. 341.

The fruit is somewhat globular, of a grayish or brownish-yellow color, and sometimes separated into two portions, or mericarps. It has a pleasant aromatic smell and taste. It is principally used as an adjuvant to other articles, to disguise their taste, or to modify their griping qualities. Dose, from a scruple to a drachm.

Compound Powder of Coriander.

℞. Powdered coriander, one drachm and a half.
Ivory filings, Burnt hartshorn, Prepared chalk, each, one scruple.
Powdered cinnamon, half a scruple.
Sugar of roses, sufficient.

Mix well. A teaspoonful, after eating, as a stomachic. *Pierquin.*

℞. Powdered coriander, " rhubarb, " columbo, each, ten grains.

Mix. To be taken at bedtime, in dyspepsia with flatulence and costiveness. Stomachic. *Ainslie.*

Tincture of Coriander.

℞. Coriander, one part.
Diluted alcohol, eight parts.

Macerate for a week, and filter. *Béral.*

Compound Water of Coriander.

℞. Coriander, eight ounces.
Fresh lemon-peel, one ounce.
Nutmeg, Storax, Benzoin, each, half an ounce.
Vanilla, three drachms.
Alcohol, forty-eight fl. ounces.

Macerate for two days, and distil. Dose, half fl. ounce, as a stomachic and carminative. *Spielmann.*

CORNU.

Hartshorn.

This is officinally the horn of the *Cervus elephas*, or European stag; but that of our native species has the same properties. It is found in the shops, in the form of shavings, which are of a yellowish-white color, friable, and without smell or taste. They consist principally of gelatine and phosphate of calcium, and are employed to make a jelly, which is not superior to any other animal jelly.

Hartshorn Jelly.

℞. Hartshorn shavings, four ounces.
Water, eight ounces.
Muriatic acid, one drachm.

Beat together for ten minutes, wash in two or three waters, boil with fresh water for half an hour, express, strain, and add

Sugar, four ounces.

Boil down sufficiently for the mixture to jelly, on cooling. *Ferrez.*

Compound Jelly of Hartshorn.

℞. Hartshorn jelly, eight ounces.
Paste of sweet almonds, one ounce.
Sugar, half an ounce.
Orange-flower water, one drachm.
Essence of citron, twelve drops.

Mix, and heat; then permit to cool. *Guibourt.*

Burnt Hartshorn.

℞. Burn pieces of hartshorn in an open vessel till quite white, powder, and prepare like prepared chalk. *Lond. Ph.*

Dose, half a drachm to two drachms.

Dentifrice of Burnt Hartshorn.

℞. Powdered burnt hartshorn, one ounce.
Orris root, two drachms.
Dragon's blood, one drachm.
Oil of roses, two drops.

Mix. *Steph. & Church.*

CORNUS

Dogwood.

CORNUS CIRCINATA.

Round-leaved Dogwood.

A large shrub, native of the United States, with a bitter, astringent, slightly aromatic bark.

CORNUS FLORIDA.

Dogwood.

A small tree, found in most parts of the United States, flowering early in the spring. The bark, especially of the root, has a bitter, astringent, somewhat aromatic taste, and a faint odor.

CORNUS SERICEA.

Swamp Dogwood.

A large shrub, like the others, a native of this country, with a bark of the same qualities.

Sex. Syst. Tetrand. monog. *Nat. Syst.* Cornaceæ.

The barks of these shrubs and trees are tonic and astringent, and are said to have much the same properties as Peruvian bark, and may be used as a substitute for it. They are, however, much inferior. The dose of the powder is from a scruple to a drachm.

Decoction of Dogwood.

℞. Dogwood bark, bruised, one troyounce.
Water, sufficient.

Boil for fifteen minutes so as to obtain a pint, and strain. *U. S. Ph.*

A wineglassful every hour, in the apyrexia of intermittents.

Fluid Extract of Dogwood.

℞. Dogwood bark, in powder, No. 60, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Moisten the powder with five fl. ounces of the mixed liquids, pack in a glass percolator, add the remaining mixture, and macerate for four days; then with diluted alcohol displace twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two troyounces, and mix with reserved portion.

Dose, a teaspoonful. *U. S. Ph.*

Pills of Round-leaved Dogwood.

℞. Extract of round-leaved dogwood, one drachm and a half.
Powdered ginger, ten grains.
Dried carbonate of sodium, ten grs.

Mix, and form twenty-four pills. *Reece.*

Wine of Round-leaved Dogwood.

℞. Extract of round-leaved dogwood, three drachms.
White wine, one pint and a half.

Digest for fourteen days, and filter.

Reece.

COTULA.

Mayweed.

A small annual syngenesious plant, a native of Europe, and extensively naturalized in the United States. It is the *Maruta cotula* of botanists. (*Anthemis cotula.* Linn.)

Sex. Syst. Syng. frust. *Nat. Syst.* Asteraceæ.

De Candolle, Prod. vi. 13. Griffith, Med. Bot. 399.

The whole herb has a strong, unpleasant smell, and a bitter, warm taste. It has much the same properties as chamomile as an internal remedy, and may be used as a substitute for it; but its disagreeable odor renders it nauseous to most persons. It is also employed in amenorrhœa, and as an antispasmodic. It is usually given in infusion.

Infusion of Mayweed.

℞. Mayweed, half an ounce.
Boiling water, one pint.

Macerate for a quarter of an hour, in a covered vessel, and strain. Used in same cases, and in same manner as infusion of chamomile.

Cataplasm of Mayweed.

℞. Mayweed, fresh, at will.

Bruise, or cut very fine. When applied as a cataplasm, it produces redness and vesication as rapidly as Spanish flies. *Ashley.*

CREASOTUM.

Creasote.

A peculiar substance, analogous to the volatile oils, existing in the products of the distillation of wood. It is a colorless, oleaginous fluid, of a burning, caustic taste, and of an odor resembling that of smoked meat. It is corrosive, but in a diluted state is an effectual preserver of animal substances. It is irritant, narcotic, styptic, etc., and has been employed in a variety of diseases, both internally and as a local application.

Creasote.

℞. Tar, at will.

Distil, changing the recipients several times, till the residue has the consistence of pitch; agitate the heavy oil that passes with a little concentrated sulphuric acid; then mix it with its own volume of water, and rectify in small retorts; dissolve the product which sinks to the bottom in a hot solution of potassa, aided by a gentle heat; when it cools, add a slight excess of sulphuric acid, separate the oil, and distil it in small quantities at a time; again rectify it two or three times. Dose, one to two drops, mixed with water.

Creasote Mixture.

℞. Creasote, six drops.
Powdered mallow,
Sugar, each, one drachm.

Mix well, and divide into three powders, to be taken during the day. In hemoptysis and phthisis. *Radius.*

Creasote Pills.

℞. Creasote, one drachm.
Powdered mallow root, sufficient

to make one hundred and ten pills. Said to be beneficial in acute rheumatism. Four or five to be taken, morning and evening.

Riech.

℞. Creasote, one drachm.
Extract of liquorice, one drachm and a half.
Water. sufficient.

Beat into mass, and make pills of two grains. Two, morning and evening, in phthisis and laryngitis. *Radius.*

℞. Creasote, ten drops.
Powdered liquorice,
Mucilage of gum Arabic, each, sufficient.

Mix, and form twenty pills. Dose, one, three times a day. In bronchitis, neuralgia, etc. *Ellis.*

℞. Creasote, one drachm.
Extract of liquorice,
Galbanum, each, half a drachm.
Powdered mallows, two drachms.

Form mass, and divide into one hundred and twenty pills. Six, four times a day, in phthisis. *Riech.*

Alcoholic Solution of Creasote.

℞. Creasote, one part.
Alcohol, sixteen parts.

Mix. A drop or two placed in the cavity of an aching tooth, will afford relief.

Marinus.

R. Creasote, one fl. drachm.
Alcohol, two fl. ounces.
Mix. Used with water as a mouth-wash, to correct fetor of the mouth, and to check caries of the teeth. *Buchner.*

R. Creasote, one fl. drachm.
Alcohol, one fl. ounce and a half.
Tincture of cochineal, six fl. drachms.
Oil of mint, thirty-six drops.
Mix. Used as above. *Righini.*

Creasote Water.

R. Creasote, one fl. drachm.
Distilled water, one pint.
Dissolve by agitation. *U. S. Ph.*

Creasote Lotion.

R. Creasote, half a drachm.
Water, five ounces.
Mix. As a lotion in psora, etc. *Radius.*

R. Creasote, ten drops.
Vinegar, two fl. drachms.
Water, two fl. ounces.
Mix. As an application to phagedenic ulcerations and chancres. *Short.*

Inhalation of Creasote.

R. Creasote, twelve minims.
Boiling water, eight fl. ounces.
Mix in an apparatus so arranged that air may be made to pass through the solution, and may afterwards be inhaled. *Brit. Ph.*

Creasote Collutory.

R. Creasote, three drops.
Compound spirit of lavender, twenty drops.
Distilled water, half fl. ounce.
Mix. *Black.*

R. Creasote, four drops.
Distilled water, two fl. ounces.
Mix. In irritation of the gums. *Fremanger.*

R. Creasote, half a fl. drachm.
Powdered gum Arabic, one ounce and a half.
Camphor water, two fl. ounces and a half.
Mix. To be used every two hours in aphthous ulceration of the mouth. *Magendie.*

Creasote Mixture.

R. Creasote,
Glacial acetic acid, each, sixteen minims.
Spirit of juniper, half a fl. drachm.
Syrup, one fl. ounce.
Water, fifteen fl. ounces.
Mix the creasote with the acid, gradually add the water, and then the spirit and syrup. *Brit. Ph.*
Dose, one to two fl. ounces.

R. Creasote, two to four drops.
Mucilage of gum Arabic, one ounce.
Infusion of salep, five ounces.
Sugar, one drachm.
Mix. A spoonful every two hours in the colliquative diarrhœa of phthisis. *Radius.*

R. Creasote, five drops.
Mucilage of gum Arabic, three fl. ounces.
Syrup of mallows, one fl. drachm.
Mix. A spoonful every three hours in hemoptysis. *Santoni.*

R. Creasote, one drop.
Camphor water,
Compound infusion of gentian, each, six fl. drachms.
Mix. To check vomiting. *Santoni.*

R. Creasote, two drops.
Lime water, two fl. ounces.
Mix. Dose, a teaspoonful with a teaspoonful of milk, to check vomiting in cholera infantum. *J. L. Smith.*

Creasote Ointment.

R. Creasote, half a fl. drachm.
Lard, one troyounce.
Mix thoroughly. *U. S. Ph.*
Creasote ointment, *Brit. Ph.*, is twice this strength.
As an application in scaly, cutaneous eruptions, ulcers, etc.

R. Simple cerate,
Oil of almonds, each, one ounce.
Creasote, thirty drops.
Mix. As an application in scrofulous caries. *Fremanger.*

Compound Ointment of Creasote.

R. Creasote,
Solution of subacetate of lead, each, ten drops.

Extract of opium, one grain and a half.
Lard, one ounce.
Mix. As an application to chilblains. *Devergie.*

℞. Creasote, half a drachm.
Purified animal charcoal, one drachm.
Alcohol, one fl. drachm and a half.
Spermaceti ointment, one ounce and a half.
Mix. Used as an application to burns, to be diluted, if necessary. *Sutro.*

CROCUS.

Saffron.

Saffron is the stigmas of *Crocus sativus*, a bulbous-rooted plant, native of Greece, Asia Minor, etc., and extensively cultivated in many parts of Europe.

Sex. Syst. Triand. monog. *Nat. Syst.* Iridaceæ.

Linn. Sp. Pl. 50. Griffith, Med. Bot. 626.

Saffron has a peculiar, sweetish, fragrant odor, a warm, bitter taste, and is of an orange-red color. It was at one time much used as an excitant, narcotic aromatic, and emmenagogue, but is seldom employed in this country, except as a coloring ingredient in compound preparations. Dose, from ten to thirty grains.

Pills of Saffron.

℞. Saffron, Myrrh, Sulphur, each, one drachm.
Inspissated bile, sufficient.
Mix, and form one hundred and fifty pills. Dose, twelve a day, as an emmenagogue. *Phœbus.*

Tincture of Saffron.

℞. Saffron, one ounce.
Proof spirit, twenty fl. ounces.
Macerate, displace, express, and filter. *Brit. Ph.*

The tincture of *Ph. Germ.* is rather less than twice this strength.

Dose, one to two fl. drachms.

Compound Tincture of Saffron.

℞. Saffron, one ounce.
Myrrh, two ounces.
Socotrine aloes, ten ounces.
Cinnamon, Mace, Nutmeg, each, half an ounce.
Orange-flower water, one pint.
Alcohol, sixteen pints.
Digest for two days, and distil off eight pints. *Cottereau.*

Elixir de Garus.

℞. Compound tincture of saffron, eight pints.
Syrup of maidenhair, ten pints.
Mix, color with caramel, dissolved in
Orange-flower water, eight fl. ounces.
Used as a stomachic and carminative. *Foy.*

Infusion of Saffron.

℞. Saffron, one part.
White wine, twenty-four parts.
Infuse, and strain. Advised in debility of the digestive organs. *Béral.*

Syrup of Saffron.

℞. Saffron, one part.
White wine, twenty-four parts.
White sugar, thirty-six parts.
Macerate the saffron in the wine for thirty-six hours, strain, and add the sugar. *Ph. Germ.*

Paris Codex uses eighteen parts of Malaga wine, and twenty-three parts of sugar.

Slightly stimulant.

Saffron Collyrium.

℞. Saffron, one part.
Boiling water, two hundred parts.
Infuse, strain, and add
Tincture of opium, one part. *Phœbus.*

Saffron Ointment.

℞. Cut saffron, one scruple.
Camphor, two scruples.
Oil of henbane, two drachms.
Goulard's cerate, six drachms.
Mix. As an application to painful hemorrhoids. *Spielmann.*

CUBEBA.

Cubebs.

Cubebs are the berries or fruit of *Piper cubeba*, a climbing perennial vine, native of many parts of the East Indies.

Sex. Syst. Diand. trigyn. *Nat. Syst.* Piperaceæ.

Linn. Sp. Pl. 90. Griffith, Med. Bot. 567.

Cubebs somewhat resemble black pepper, but are of a lighter color, and are furnished with a short stalk. The shell is thin and hard, and the seed round, white, and oily. The taste is acrid, peppery, and camphoraceous; the odor aromatic and pleasant. Cubebs are stimulant, with a special action on the genito-urinary organs, and have been much used in gonorrhœa, leucorrhœa, etc., and have also been found useful in piles, bronchitis, etc. The dose of the powder is from ten grains to three drachms, according to circumstances.

Powder of Cubebs.

℞ Powdered cubebs, half a drachm to one drachm.
" ipecacuanha, eighth of a grain.
Oil of peppermint, half a drop.

Mix. To be taken four times a day, in gonorrhœa. *Schmidt.*

Powder of Cubebs and Ergot.

℞ Powdered ergot, two scruples.
" cubebs, one ounce.
" cinnamon, half a drachm.
" sugar, one drachm.

Mix, and divide into eight powders. One to be given three or four times a day. In gonorrhœa, gleet, leucorrhœa, etc. *Ryan.*

Powder of Cubebs and Hemlock.

℞ Powdered cubebs, half a drachm to a drachm.
Extract of hemlock, half a grain.
Prepared oyster shell, five grains.

Mix. To be taken four times a day in gonorrhœa. *Phœbus.*

Powder of Cubebs and Alum.

℞ Powdered cubebs, two ounces.
" alum, half an ounce.

Mix, and divide into nine powders. One to be taken three times a day. *Ricord.*

Cubeb Lozenges.
(Spitta's Lozenges.)

℞ Powdered cubebs, two drachms.
Balsam of tolu, six grains.

Mix, and add

Extract of liquorice, one ounce.
Syrup of balsam of Peru, one drachm.
Gum Arabic, sufficient.

Rub well together, and form lozenges of ten grains. One of these, permitted gradually to melt in the mouth, alleviates the obstruction in the nose, in coryza. *Spitta.*

℞ Oleoresin of cubeb, half a fl. ounce.
Oil of sassafras, a fl. drachm.
Powdered liquorice, four troyounces.
" gum Arabic, two troyounces.
" sugar, three troyounces.
Syrup of tolu, sufficient.

Mix the powders, add the oil and oleoresin, then with the syrup form a mass, to be divided into four hundred and eighty lozenges. *U. S. Ph.*

Used like the preceding.

Electuary of Cubebs.

℞ Powdered cubebs, half an ounce.
Clarified honey, sufficient.

Mix. Three or four teaspoonfuls a day, in gonorrhœa, mucous discharges from the bladder, etc. *Radius.*

℞ Powdered cubebs,
Copaiba, each, two ounces.
Powdered alum, one ounce.
Extract of opium, five grains.

Rub together. Dose, one drachm, night and morning, in the pulp of a prune, rapidly increasing the dose to two drachms. In gonorrhœa. *Béral.*

Zoll's Compound Confection.

℞ Powdered cubebs, one troyounce.
Powdered alum,
Copaiba, each, half a troyounce.
Gum Arabic, three drachms.
Simple syrup, half an ounce.

Mix. Used like the preceding. *Maryl. Coll. Ph.*

Injection of Cubebs.

℞ Powdered cubebs, one ounce.
Water, one pint.

Boil, and strain. Add

Extract of belladonna, one scruple.

In gonorrhœa and leucorrhœa. *Soubeiran.*

Clyster of Cubebs.

℞. Powdered cubebs, one to four drachms.
Decoction of mallows, six ounces.

Mix. To be administered night and morning, in gonorrhœa. *Foy.*

Oleoresin of Cubebs.

℞. Cubebs, in powder, No. 60, twelve troyounces.
Ether, sufficient.

Press the powder into a displacer, arranged with cover and receptacle suitable for volatile liquids, add the ether gradually, and obtain by slow displacement twenty-four fl. ounces. Distil, with care, the greater part of the ether, and expose the residue in a capsule until all the ether has evaporated. Decant the oleoresin from the waxy and crystalline matter which deposits on keeping the product in a bottle. *U. S. Ph.*

Dose, ten to twenty minims.

Fluid Extract of Cubebs.

℞. Cubebs in powder, No. 50, sixteen troyounces.
Stronger alcohol, sufficient.

Moisten the powder with six fl. ounces of the alcohol, pack firmly in a percolator, add ten fl. ounces of stronger alcohol and macerate for four days. Then displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with the reserved portion. *U. S. Ph.*

Dose, a teaspoonful.

Emulsion of Fluid Extract of Cubebs.

℞. Oleoresin of cubebs, two drachms.
Powdered gum Arabic, half an ounce.
" sugar, one drachm.
Water, three ounces and a half.

Mix. A tablespoonful is equal to two drachms of cubebs. *W. Procter.*

Alcoholic Ethereal Extract of Cubebs.

℞. Powdered cubebs, at will.

Exhaust by ether, by means of a displacement apparatus, act on residue with diluted alcohol, and distil the two tinctures separately. Evaporate the residue of the alcoholic tincture by means of a water-bath; add both together, and let the remaining ether evaporate spontaneously. *Labelonye.*

Lozenges of Alcoholic-Ethereal Extract of Cubebs.

℞. Extract of cubebs, eight ounces.
Alcohol, two pints.

Dissolve, and add

Powdered sugar, one pound.
Oil of peppermint, eighteen drops.

Mix, and allow alcohol to evaporate by a gentle heat; reduce to a powder, and add

Mucilage tragacanth, sufficient.

Mix, and divide into lozenges of six to eighteen grains. *Labelonye.*

Cubeb Mixture.

℞. Powdered cubebs, two drachms.
Carbonate of sodium, half a drm.
Mucilage of gum Arabic, six fl. drachms.
Mint water, six fl. ounces.

Mix. A tablespoonful every hour. *Fosbroke.*

℞. Powdered cubebs, two drachms.
Subnitrate of bismuth, half a drachm.
Mucilage of gum Arabic, half fl. ounce.
Syrup, six fl. drachms.
Water, six fl. ounces.

Mix. A tablespoonful four times a day. *Fosbroke.*

Both these are recommended in the various affections of mucous membranes.

℞. Powdered cubebs, two drachms.
Wine, two ounces.
Essence of bergamot, one drop.

Mix. To be taken every hour or two. *Pierquin.*

Tincture of Cubebs.

℞. Powdered cubebs, four troyounces.
Diluted alcohol, sufficient.

Obtain by percolation two pints. *U. S. Ph.*

The product of the formula of *Brit. Ph.* is nearly the same.

Dose, one to two drachms, as a stomachic and carminative, or in advanced stage of gonorrhœa.

Ethereal Tincture of Cubebs.

℞. Powdered cubebs, four ounces.
Spirit of nitrous ether, two pints.

Digest for eight days and filter. Serviceable in subacute inflammations of bladder, uterus, and of the mucous lining of the stomach and intestines. *Mettauer.*

Syrup of Alcoholic-Ethereal Extract of Cubebs.

℞. Extract of cubebs, three ounces.
Mucilage of gum Arabic, sufficient.
Peppermint water, one pint.
White sugar, two pounds.

Mix. A teaspoonful, several times a day, in a glass of water. *Labelonye.*

Oil of Cubebs.

℞. Powdered cubebs, one part.
Water, two parts.

Distil, and collect the oil. *Giordano.*

Dose, ten to twelve drops, gradually increased. Given in emulsion, or in gelatin capsules.

Mixture of Oil of Cubebs and Copaiba.

℞. Oil of cubebs, one scruple.
Copaiba, two ounces.

Mix. A teaspoonful, four times a day. *Béral.*

CUCUMIS.

Cucumis.

The seeds of several species are sometimes used medicinally, namely, of *C. citrullus* or watermelon, *C. melo* or musk melon, and *C. sativus* or cucumber; the juice of the latter has likewise been employed for making cucumber ointment.

Sex. Syst. Monœc. monad. *Nat. Syst.* Cucurbitaceæ.

They are inodorous, have a mucilaginous and oily taste, and act as a demulcent and diuretic. A decoction made of half an ounce of the seeds to a pint of water has been found useful in incontinence of urine and strangury, in doses of one or two fluidounces.

Cucumber Ointment.

℞. Green cucumbers (fit for the table), seven pounds.
Lard, twenty-four ounces.
Veal suet, fifteen ounces.

Wash and grate the unpared cucumbers, and express the juice. Melt the suet, add the lard, and strain, stirring constantly; as it thickens, add one-third of the juice, and beat with a wooden spatula. The part that separates by standing is decanted, and the other two-thirds are consecutively incorporated, and decanted in the same manner. It is usual to keep the ointment in glass jars, covered with rose water, to prevent access of air. *W. Procter, Jr.*

CUNILA.

Dittany.

The whole herb of *Cunila mariana.* A native plant, found in most places in the United States.

Sex. Syst. Diand. monog. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 30. Griffith, Med. Bot. 509.

It has a powerful, aromatic odor, and a warm, pungent taste. It is stimulant, carminative, sudorific, and emmenagogue.

Infusion of Dittany.

℞. Dittany, half an ounce.
Boiling water, one pint.

Infuse and strain. Used warm, as a diaphoretic and emmenagogue.

Oil of Dittany.

℞. Dittany, at will.
Water, sufficient.

Distil, and separate the oil. As a carminative, in doses of two or three drops, with sugar.

CUPRUM.

Copper.

A brilliant, ductile, malleable metal, of a reddish color, having an unpleasant taste and smell. It is not used in its pure state in medicine, but its salts afford numerous remedial preparations.

CUPRI ACETAS.

Acetate of Copper.

℞. Pulverized verdigris, at will.
Acetic acid, sufficient.

Dissolve, filter, evaporate, and crystallize. *Van Mons.*

Pills of Acetate of Copper.

℞. Acetate of copper, fifteen grains.
Boiling water, sufficient

to dissolve; add

Opium, five grains.
Extract of liquorice, one drachm.
Powdered liquorice, sufficient.

Mix, and make one hundred and eighty pills. Dose, three to ten, three times a day. *Phœbus.*

CUPRI SUBACETAS PRÆPARATUM.

VERDIGRIS.

Prepared Subacetate of Copper.

℞. Virdigris, in powder, at will.

Reduce to powder by trituration in a mortar, and separate the finer parts for use by a sieve. *Dub. Ph.*

Powder of Verdigris and Savine.

℞. Verdigris,
Savine, equal parts.

Mix. To be dusted on sores with fungous excrescences. *Ellis.*

Verdigris and Alum.

℞. Verdigris, Nitre, Alum, } each, eight parts.

Melt together, and add

Camphor, one to two parts.

Much used in Europe as a basis for ophthalmic solutions, under the name of *Beer's divine stone.* *Radius.*

Ophthalmic Washes.

℞. Beer's divine stone, eight to twelve grains.
Water, four fl. ounces and a half.
Wine of opium, a fl. scruple to one fl. drachm.

Mix. In chronic ophthalmia. *Benedict.*

℞. Beer's divine stone, three to four grains.
Elder water, one fl. ounce.
Tincture of opium, twelve drops.
Solution of subacetate of lead, five drops.

Mix. Used like the last. *Rust.*

Compound Verdigris Lotion.

℞. Verdigris,
Burnt alum, each, two drachms.
Honey, half an ounce.
White wine, one pint.

Mix. As a wash for indolent venereal or scorbutic ulcers. *Scherf.*

Metz's Balsam.

℞. Linseed oil,
Olive oil, each, six ounces.
Oil of laurel berries, one ounce.
Turpentine, two ounces.

Melt by a gentle heat, and add

Powdered aloes, two drachms.
" verdigris, three drachms.
" white vitriol, one drachm and a half.

Pour into a bottle, and add

Oil of juniper, half an ounce.
" cloves, one drachm.

Mix. As a dressing to wounds and ulcers. *Guibourt.*

Verdigris Ointment.

℞. Verdigris, in fine powder, one drachm.
Simple ointment, fifteen drachms.

Melt the ointment, add the verdigris, and stir till cold. *U. S. Ph.* 1840.

Used as a mild escharotic and stimulant to fungous ulcers, to warts, corns, etc., and obstinate cutaneous affections.

℞. Verdigris, two drachms.
Oxide of zinc,
Camphor, dissolved in alcohol, each, six drachms.

Triturate well, and incorporate with a melted mixture of

Lard,
Suet, each, two ounces,

and stir till cold. Recommended in scrofulous ophthalmia. *Swediaur.*

Verdigris Plaster.

℞. Yellow wax, four parts.
Burgundy pitch, two parts.
Common turpentine, one part.

Melt together, strain, and add

Verdigris, one part.

Paris Codex.

Ph. Germ. directs only one-third part of verdigris. A good application for corns and warts.

Egyptian Ointment.

℞. Verdigris, five parts.
Purified honey, sixteen parts.
Strong vinegar, seven parts.
Burnt alum, half a part.

Mix, and melt by a gentle heat, stirring constantly. This is thought to form an excellent detergent application to ulcers. *Giordano.*

Liniment of Verdigris.

℞. Powdered verdigris, one ounce.
Vinegar, seven fl. ounces.
Honey, fourteen ounces.

Dissolve the verdigris in the vinegar, strain, gradually add the honey, and boil down to proper consistence. *Lond. Ph.*

Used like the last, and also much diluted as a gargle in venereal sore throat.

CUPRI CHLORIDUM.

CHLORIDE OF COPPER.

℞. Chloride of potassium, seven parts.
Sulphate of copper, eleven and a half parts.

Pulverize, mix, and gradually add twelve parts boiling water; on cooling, filter, separate the sulphate of potassium that forms, then permit the crystals of the chloride to form, separate, and dry. *Van Mons.*

Cupreous Ether.

℞. Chloride of barium, ten parts.
Sulphate of copper, twelve parts.
Sulphuric ether, six parts.

Triturate the salts together, add the ether, and decant when all the chloride of copper is dissolved. Has been recommended in small doses in epilepsy. *Van Mons.*

Chloride of Copper and Ammonia.

℞. Chloride of copper,
" ammonium, equal parts.

Dissolve in water, add liquid ammonia, drop by drop, as long as any precipitate takes place, and is again dissolved by the addition of more ammonia; filter, and evaporate. *Augustin.*

Used in epilepsy, in doses of two to ten grains.

Solution of Ammoniacal Chloride of Copper and Mercury.

℞. Copper filings, two drachms.
Calomel, two ounces.

Dissolve the copper in two fl. ounces liquid ammonia, and the calomel in two fl. ounces muriatic acid, with fifteen drops of nitric acid; mix the solutions in such proportions that the precipitate that first forms is redissolved. *Radius.*

Koechlin's Drops.

℞. Solution of ammoniacal chloride of copper and mercury, two fl. drachms.
Distilled water, twenty fl. ounces.

Mix. Much praised in obstinate venereal affections, scrofula, etc. Dose, a teaspoonful after each meal. *Augustin.*

CUPRUM AMMONIATUM.

AMMONIATED COPPER.

℞. Sulphate of copper, half a troyounce.
Carbonate of ammonium, six drachms.

Rub together in a glass mortar till effervescence ceases, wrap in bibulous paper, and dry with a gentle heat. *U. S. Ph.*

℞. Pure sulphate of copper, one part.
Water of ammonia, three parts.
Alcohol, six parts.

Dissolve the salt in the ammonia water, add the alcohol, collect the precipitate, and dry between bibulous paper without heat. *Ph. Germ.*

Has been used in epilepsy, chorea, hysteria, etc. Dose, a quarter to half a grain twice a day, and gradually increased.

Solution of Ammoniated Copper.

℞. Ammoniated copper, one drachm.
Distilled water, one pint.

Dissolve and filter. *Lond. Ph.*

As a lotion to foul and indolent ulcers, or internally, in same cases as the powder.

Injection of Ammoniated Copper.

℞. Ammoniated copper, five grains.
Rose water, eight fl. ounces.

Mix. In gonorrhœa. *Ellis.*

Powder of Ammoniated Copper and Belladonna.

℞. Ammoniated copper, two to four grains.
Powdered belladonna root, one to four grains.
Sugar, one drachm.

Mix, and form six powders. One to be taken every two hours, in epilepsy. *Hildebrand.*

Pills of Ammoniated Copper.

℞. Ammoniated copper, two grains.
Crumb of bread, sufficient.

Mix, and form four pills. One to be taken twice a day, in epilepsy, gradually increasing the dose. *A. T. Thomson.*

℞. Ammoniated copper, fifteen grains.
Crumb of bread, two scruples.
Sugar, one scruple.
Liquid ammonia, sufficient.

Mix, and form thirty pills. Dose, one, three times a day, gradually increased. In epilepsy. *Van Mons.*

Compound Pills of Ammoniated Copper.

℞. Ammoniated copper,
Opium, each, ten grains.
Extract of dandelion,
Powdered mallow, each,
two scruples.

Mix, and form fifty pills. Dose, five, twice a day, in diabetes. *Radius.*

Gargle of Ammoniated Copper.

℞. Ammoniated copper, eight grains.
Savine water, six fl. ounces.

Mix. In chronic sore throat. *Kopp.*

Ointment of Ammoniated Copper.

℞. Solution of ammoniated copper, one fl. drachm.
Simple cerate, melted, one ounce.

Mix well. As a stimulant to indolent ulcers. *Swediaur.*

CUPRI SULPHAS.

Sulphate of Copper.

Powder of Sulphate of Copper.

℞. Sulphate of copper, twelve grains.
Sugar of milk, four scruples.

Mix, and divide into four powders. Much praised in croup—given as follows: one is to be administered at once; another dissolved in three spoonfuls of water, one of which is to be taken every hour. *Radius.*

℞. Sulphate of copper, four grains.
Sugar of milk, eight scruples.

Mix, and divide into eight powders. Two a day, in obstinate diarrhœa. *Elliotson.*

Compound Powder of Sulphate of Copper.

℞. Sulphate of copper,
" zinc,
Alum,
Carbonate of lead,
Armenian bole, } equal parts.

Melt the first three substances together, pulverize, add the other two articles, and sift.

This is a powerful astringent, and has proved useful as a styptic. *Cottereau.*

Aluminated Sulphate of Copper. Lapis Divinus.

℞. Sulphate of copper,
Nitrate of potassium,
Alum, each, twenty parts.

Melt, and before congealing, add

Powdered camphor, one part.

Used in eye-washes. *Paris Codex.*

Ph. Germ. adds one and a quarter parts of camphor, previously mixed with same quantity of powdered alum.

Pills of Sulphate of Copper.

℞. Sulphate of copper, four grains.
Extract of cinchona, thirty-two grains.

Mix, make mass, and divide into sixteen or twenty pills. One to be taken three times a day, in obstinate intermittents. *Ellis.*

℞. Sulphate of copper,
Ipecacuanha, each, one drachm.
Syrup, sufficient.

Form mass, and divide into pills of five grains each. Dose, two to four, every two or three days, in the morning, before eating, in phthisis. *Foy.*

℞. Sulphate of copper, six grains.
Powdered calamus, two drachms.
Extract of liquorice,
Water, each, sufficient.

Form mass, and divide into ninety-six pills. Four to seven, two or three times, in the apyrexia of obstinate intermittents. *Adair.*

Pills of Sulphate of Copper and Opium.

℞. Sulphate of copper, two grains.
Opium, four grains.
Conserve of roses, sufficient.

Mix, and make sixteen pills. One, three times a day, in obstinate intermittents. *Chapman.*

Compound Pills of Sulphate of Copper.

℞. Sulphate of copper, two grains.
Alcohol. ext. cascarilla, seventeen grains.

Opium, two grains.
Syrup of ginger, sufficient.
Mix, and make eight pills. One, three times a day, in epilepsy. *Ainslie.*

Electuary with Sulphate of Copper.

℞ Sulphate of copper, one scruple.
Opium, one grain.
Armenian bole,
Catechu, each, one drachm and a half.
Syrup, sufficient.
Mix. In obstinate diarrhœa. *Saunders.*

Gargle with Sulphate of Copper.

℞ Sulphate of copper, twenty grains.
Infusion of sage, six fl. ounces.
Tincture of myrrh, } each, one drachm.
" catechu, }
" kino, }
" pimpinella, five drachms.
Honey, six drachms.
Mix well. In obstinate salivation. *Kopp.*

Collyrium of Sulphate of Copper.

℞ Sulphate of copper,
Armenian bole, each, eight grains.
Camphor, two grains.
Boiling water, eight fl. ounces.
Rub well together, permit to settle, and strain. As an application in purulent ophthalmia of infants. *Ware.*

℞ Sulphate of copper, six grains.
Camphor, one drachm.
Boiling water, eight fl. ounces.
Rub the camphor with the water, strain, and add sulphate of copper. As a substitute for the above. *Ellis.*

℞ Aluminated sulphate of copper, six grains.
Distilled water, three troyounces.
Dissolve and filter. *Paris Codex.*

Sulphate of Copper Lotion.

℞ Sulphate of copper, one ounce and a half.
Alum, five drachms and a half.
Sage leaves, five ounces.
Vinegar, one pint.
Solution of chloride of ammonium, two pints.
Boil together for half an hour. Used as an application, in a tepid state, to swellings and contusions. *Purmann.*

Injection of Sulphate of Copper.

℞ Sulphate of copper, six grains.
Distilled water, six fl. ounces.
Tincture of opium, one fl. drachm.
Dissolve. As an injection in chronic gonorrhœa. *Ellis.*

℞ Sulphate of copper, six grains.
Distilled water, four fl. ounces.
Dissolve, and add
Solution subacetate of lead, twenty drops.
As a wash and injection in phimosis. *Swediaur.*

Ointment of Sulphate of Copper.

℞ Sulphate of copper,
Calamine, each, five grains.
Camphor, two grains.
Fresh butter, two drachms.
Triturate well together. A small portion to be applied to the edges of the eyelids, in the evening, in psorophthalmia. *Rust.*

℞ Sulphate of copper,
Verdigris, each, two drachms.
Alum, half an ounce.
Corrosive sublimate, two scruples.
Lard, one pound.
Burgundy pitch, one ounce.
Melt the pitch and lard by a gentle heat, and add the other ingredients, stirring till cold. As a dressing to venereal and fungous ulcers. *Augustin.*

℞ Powdered sulphate of copper,
" catechu, each, four drachms.
" alum, nine drachms.
" resin, four ounces.
Olive oil, sufficient.
Make ointment. As an application to indolent and ill-conditioned ulcers. *Kerr.*

Sulphate of Copper Styptic.

℞ Sulphate of copper, three grains.
Sulphuric acid, twenty drops.
Water, two ounces.
Dissolve. In epistaxis. Twenty to forty drops to be taken in water, every hour. *Thatcher.*

CURCUMA.

Turmeric.

It is the rhizome of *C. longa*, an herbaceous plant, indigenous to, and extensively cultivated in, southern and southwestern Asia.

Sex. Syst. Monand. monog. *Nat. Syst.* Zingiberaceæ.

Two varieties are known, the round and the long, both produced from the same plant; they are brown-yellow externally, are orange-yellow internally, and present a resinous fracture; odor and taste are aromatic, resembling ginger, with which it agrees in medicinal properties. It is now rarely used in medicine, but is employed for imparting a yellow color to fats and alcoholic liquids, and as a test for alkalies which change the yellow color to brown.

℞ Turmeric, bruised, one part.
Stronger alcohol, five parts.

Macerate for a week, and filter.

CYDONIUM.

Quince Seeds.

These seeds are the product of *Cydonia vulgaris*, a small tree, native of some parts of Europe, but extensively cultivated in this country. The fruit is much used for the purpose of making preserves.

Sex. Syst. Icosand. pentag. *Nat. Syst.* Pomaceæ.

Persoon, Enchirid. ii. 40. Griffith, Med. Bot. 291.

The seeds are inodorous, insipid, and abounding with mucilage; one drachm rendering six ounces of water viscid. Used like the other bland mucilages.

Mucilage of Quince Seeds.

℞ Quince seeds, one part.
Rose water, fifty parts.

Macerate for half an hour with occasional agitation, and strain. *Ph. Germ.*

℞ Quince seeds, one ounce.
Boiling water, six fl. ounces.

Digest on hot coals, for two hours; strain.

Both these are used in ophthalmia, etc.

Quince Seed Mixture.

℞ Mucilage of quince seeds, one ounce.
Yolks of eggs, two.
Honey of roses, three ounces.

Mix. A teaspoonful occasionally, in cough and hoarseness. *St. Marie.*

Bandoline for the Hair.

℞ Mucilage of quince seeds, eight fl. ounces.
Cologne water, or
Brandy, eight fl. ounces.

Mix.

Used as an application to the hair, to give gloss and smoothness.

CYMINUM.

Cumin.

Cumin fruit is produced by *Cuminum cyminum*, an umbelliferous plant, a native of Egypt, but cultivated in southern Europe.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Linn. Sp. Pl. 365. Lindley, Fl. Med. 51.

The fruit has a peculiar, strong, heavy odor, and a warm, bitterish, aromatic taste. It is carminative and stimulant, is seldom used internally, but enters into the composition of some warm plasters.

Cumin Plaster.

℞ Cumin, Caraway, Laurel berries, each, three ounces.
Burgundy pitch, three pounds.
Yellow wax, three ounces.
Olive oil,
Water, each, one fl. ounce and a half.

Melt the pitch and wax together, add the other ingredients, stirring well, and evaporate to a proper consistence. *Lond. Ph.*

CYPRIPEDIUM.

Lady's Slipper.

It is the rhizome of two yellow flowering species, *C. pubescens* and *C. parviflorum*, both indigenous to North America.

Sex. Syst. Gynand. diand. *Nat. Ord.* Orchidaceæ.

The rhizome is several inches long, horizontal, bent, with prominent scars of the stems and long slender rootlets varying in color from light to blackish brown; they have little odor and a mucilaginous, bitter, and acrid taste. Cypripedium is used as a nervous stimulant in doses of ten to twenty grains.

Fluid Extract of Cypripedium.

℞ Cypripedium, in powder No. 60, sixteen troyounces.
Alcohol, sufficient.

Macerate the powder, properly packed in a percolator, with one pint of alcohol, for four days; then displace slowly twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces and mix with reserved portion.

D.

DELPHINIUM.

Larkspur.

The *Delphinium consolida* is a native of Europe, but has become partially naturalized in this country, and is also much cultivated in gardens as an ornamental flower.

Sex. Syst. Polyand. trigyn. *Nat. Syst.* Ranunculaceæ.

Linn. Sp. Pl. 748. Griffith, Med. Bot. 88.

Several parts of this plant have been employed medicinally, as the flowers, seeds, and root. They owe their properties to the presence of an alkaloid, called delphinia. The flowers are said to be diuretic, vermifuge, and emmenagogue; and the seeds and root to be diuretic, etc.

Tincture of Larkspur Seeds.

℞ Larkspur seeds, one ounce.
Diluted alcohol, one pint.

Macerate for some days, and filter. Dose, ten to twenty drops, three times a day, in spasmodic asthma. *Augustin.*

DELPHINIA.

Delphinia.

This alkaloid is prepared from the seeds of different species of *Delphinium*, but generally from those of the *D. staphisagria*.

℞ Larkspur seeds, at will.
Water, sufficient.

Boil, repeat the decoction with another portion of water, till all soluble portions of the seeds are dissolved. Concentrate the united decoctions, add calcined magnesia, and filter after a short ebullition. Wash the precipitate with cold water, and dry it; digest it in alcohol on a water-bath, and permit to crystallize. *Magendie.*

This is used in the same cases as veratria, in doses of a quarter to half a grain, to the extent of two or three grains a day. It is also employed in ointment, or in solution in alcohol.

Solution of Delphinia.

℞ Delphinia, one scruple.
Rectified spirit, two fl. ounces.

Dissolve. For outward use. *Turnbull.*

Ointment of Delphinia.

℞ Delphinia, ten to thirty grains.
Olive oil, one drachm.

Rub together, and add

Lard, one ounce.

Mix well. *Turnbull.*

DEXTRINUM.

Dextrin.—Gum Starch.

It is obtained on a large scale by heating starch with great care to between 300° and 350°. It is a yellowish powder, almost inodorous, nearly tasteless, soluble in water, but insoluble in strong alcohol. *Ph. Germ.* directs to heat one hundred and fifty parts of starch with three times its weight of water and four parts of oxalic acid, until the starch has disappeared; the acid is neutralized by carbonate of calcium, and the filtrate evaporated to dryness. When pure it is not colored blue by iodine, and does not, at ordinary temperature, reduce alkaline solutions of oxide of copper.

It is used to form immovable apparatus for fractures, and internally, dissolved in water, as a demulcent drink.

Purified Dextrin.

℞ Dextrin, ten parts.
Cold water, eighteen parts.

Dissolve, strain, add to the liquid twice its bulk of alcohol and, when clear, decant; dissolve the precipitate in a little distilled water, and dry upon plates. *Hager.*

Dry Narcotic Extracts.

℞ Pure dextrin,
Narcotic extract, each, ten parts.

Mix, dry below 122° F., add dextrin to make twenty parts, and powder. When employing narcotic extracts in the form of powder, the physician prescribes the ordinary extract, and the pharmacist dispenses double the weight of the extract dried as above. *Ph. Germ.*

DIANTHUS.

Pink.

The only species that is officinal is *D. caryophyllus* or clove pink, a native of the south of Europe, but generally cultivated in gardens, for the beauty and fragrance of its flowers.

Sex. Syst. Decand. digyn. *Nat. Syst.* Caryophyllaceæ.

Linn. Sp. Pl. 587. Woodville, Med. Bot. i. 205.

The parts used are the flowers; these should be of a dark-red color, and very aromatic. They are principally employed to form a syrup, which is used as a vehicle for other medicines.

Syrup of Clove Pink.

℞. Petals of clove pink, one part.
Boiling water, ten parts.

Infuse for six hours, strain, and add nineteen parts of sugar. *Paris Codex.*

DIGITALIS.

Foxglove.

The foxglove is a native of Europe, but is cultivated in this country, both as an ornamental plant, and for medicinal purposes.

Sex. Syst. Didynam. angios. *Nat. Syst.* Scrophulariaceæ.

Linn. Sp. Pl. 868. Griffith, Med. Bot. 520.

The parts used are the leaves; these should be collected from wild plants, when about two-thirds of the flowers are expanded, dried in the dark, and always kept from the light. When good, they are of a dull green color, a feeble, narcotic odor, and a bitter, unpleasant taste. Digitalis is narcotic, sedative, and diuretic, and, in large doses, poisonous. It is given to fulfil many indications; as a diuretic, as a sedative, and antispasmodic, to reduce the force of the circulation, etc. It is given in substance in the dose of one grain, two or three times a day, gradually increasing the quantity to four grains, or until some effect is produced on the system.

Powder of Foxglove.

℞. Powdered foxglove, one grain.
" cinnamon, four grains.
" sugar, ten grains.

Mix. For a single dose, to be repeated two or three times a day. *Radius.*

℞. Foxglove, a quarter to one grain.
Sulphate of quinia, a half to two grains.
Fennel, six grains.
Sugar of milk, ten grains.

Mix. To be taken three or four times a day, in phthisis. *Gunther.*

℞. Powdered foxglove, ten grains.
" calomel, six grains.
" valerian, two scruples.
" assafetida,
" castor,
each, half a drachm.
" sugar, one drachm.

Mix, and divide into twenty-four powders. One, morning and evening, in the convulsions attendant on hydrocephalus. *Pierquin.*

℞. Powdered foxglove, fifteen grs.
" nitre, three drachms.
" cremor tartar,
half an ounce.

Mix, and divide into six powders. One to be taken every two hours. As a diuretic in dropsies. *Brera.*

℞. Powdered foxglove, six grains.
Golden sulphuret of antimony,
Calomel, each, three grains.
Sugar, one drachm.

Mix, and divide into six powders. One, every three hours, in peripneumonia. *Radius.*

℞. Powdered foxglove, eight grains.
Extract of opium, four grains.
Sugar, one drachm.
Oil of peppermint, four drops.

Mix, and divide into eight powders. One in the evening, in palpitation of the heart. *St. Marie.*

Extract of Digitalis.

℞. Fresh digitalis, twenty parts.
Water, one part.

Beat in a stone mortar into pulp, express; treat residue with three parts of water in same manner; heat mixed liquids to 175°, strain, and evaporate to two parts. Mix this with two parts of alcohol; after twenty-four hours strain, express sediment, exhaust this thoroughly with one part of diluted alcohol, filter the mixed liquors, and evaporate to proper consistence. *Ph. Germ.*

Paris Codex infuses dry digitalis with hot water, and evaporates. Dose, half to three grains.

Alcoholic Extract of Digitalis.

℞. Digitalis, in powder,
No. 60, twelve troyounces.
Alcohol, a pint.
Diluted alcohol, sufficient.

Displace powder first with alcohol, then with diluted alcohol to obtain three pints. Evaporate first pint spontaneously to three fluidounces; evaporate remainder to syrup, mix with other portions, and evaporate at 120° to proper consistence. *U. S. Ph.*

Paris Codex exhausts one part digitalis with six parts alcohol, sp. gr. 0.914, displacing finally with water, distils, and evaporates.

Bolus of Foxglove.

℞. Powdered foxglove, fifteen grains.
Calomel, eight grains.
Root of juniper, one drachm.

Mix, and form four boluses. One, every four hours, in encephalitis. *Brera.*

℞ Powdered foxglove, twelve grains.
Calomel, six grains.
Tartar emetic, two grains.
Purified honey,
Powdered liquorice root,
each, sufficient.

Mix, and form four boluses. One, every four hours, in hemoptysis and engorgement of the abdominal viscera. *Brera.*

Pills of Foxglove.

℞ Powdered foxglove, twelve grains.
Calomel, six grains.
Opium, two grains.
Conserve of roses, sufficient.

Mix, and form twelve pills. One to be taken every eight hours, in hydrothorax and ascites. *Ellis.*

℞ Powdered foxglove, four grains.
" camphor, twelve grains.
Extract of henbane, eighteen grs.

Mix, and make six pills. Two to be taken at bedtime. Used in maniacal and spasmodic affections. *A. T. Thomson.*

℞ Powdered squill, four grains.
" myrrh, one scruple.
" foxglove, ten grains.
Calomel, six grains.

Triturate together, and add

Assafetida, half a drachm.
Extract of gentian, sufficient.

Beat into mass, and divide into fifteen pills. One, night and morning, as a diuretic in dropsies. *Paris.*

℞ Powdered foxglove,
" opium, each, six grains.
Conserve of roses, sufficient.

Mix, and make twelve pills. One to be taken every four hours. In asthma, etc. *Ellis.*

℞ Powdered foxglove, one drachm.
Extract of hemlock, } each,
" rhubarb, } half a
Aloes, } drachm.
Ammoniac, four scruples.
Oxymel of squill,
Powdered liquorice root,
each, sufficient.

Mix, and make pills of six grains. Three to be taken morning and evening. In dropsy, etc. *Brera.*

Pills of Foxglove and Squill.

℞ Powdered foxglove,
" squill, each, one part.
Aromatic electuary, two parts.
Confection of roses, sufficient.

Beat them into a mass, and divide into pills of four grains each. *Ed. Ph.*
Dose, one or two pills.

Infusion of Digitalis.

℞ Digitalis, in powder,
No. 20, one drachm.
Boiling water, half a pint.
Tincture of cinnamon, one
fl. ounce.

Macerate the foxglove with the water, in a covered vessel, for two hours; strain, and add the tincture. *U. S. Ph.*
The dose is half a fl. ounce, twice a day, till the system is affected.

℞ Digitalis, bruised, thirty grains.
Boiling distilled water, ten
fluidounces.

Infuse for one hour, and strain. *Brit. Ph.*
About half the strength of preceding.

Fluid Extract of Digitalis.

℞ Digitalis, in powder,
No. 50, sixteen troyounces.
Glycerin, three fluidounces.
Alcohol, twelve fluidounces.
Water, one fluidounce.

Mix the liquids, moisten the powder with half a pint of the mixture, pack it well into a percolator, add the remaining liquid, and macerate for four days; then displace with diluted alcohol twenty-four fluidounces, reserve the first fourteen fluidounces, add to the remainder one fluidounce of glycerin, evaporate to two fluidounces, and mix with the reserved portion. *U. S. Ph.*

Mixture of Foxglove and Acetate of Potassium.

℞ Infusion of foxglove, four
fl. ounces.
Tincture of foxglove, one
fl. drachm.
Acetate of potassium, one drachm.
Tincture of opium, ten drops.

Mix. A dessertspoonful three or four times a day; as a diuretic. *Ellis.*

Mixture of Foxglove and Acetate of Lead.

℞. Powdered foxglove, three to five grains.
Solution of subacetate of lead, five drops.
Syrup of orange flowers, one ounce.
Infusion of poppies, six ounces.

Mix. In spoonful doses, in hypertrophy of the heart. *Foy.*

Mixture of Foxglove and Tartaric Acid.

℞. Infusion of foxglove, half an ounce.
Tartaric acid, one scruple.
Carbonate of sodium, twenty-four grains.
Sweet spirit of nitre, one drachm.
Tincture of squill, four drops.
Mint water, two ounces.

Mix. As a diuretic, in ascites. To be taken twice or thrice a day. *Dewees.*

Expectorant Mixture of Foxglove.

℞. Foxglove leaves, thirty grains.
Boiling water, sufficient

to obtain four ounces of strained infusion, add

Syrup of gum Arabic, three ounces.
Kermes mineral, six grains.
Syrup of mallows, one ounce.

Mix. To be taken in teaspoonful doses, in pneumonia and pleurisy. *Brera.*

Tincture of Digitalis.

℞. Digitalis, in powder, No. 60, four troyounces.
Diluted alcohol, sufficient.

Obtain by displacement, two pints of tincture. *U. S. Ph.*

Tincture of *Brit. Ph.* is about the same strength. *Paris Codex* displaces with alcohol of 0.914, five parts from one part digitalis.

℞. Fresh digitalis, five parts.
Alcohol, six parts.

Bruise leaves in stone mortar, add alcohol, macerate for eight days, express, and filter. *Ph. Germ.*

Dose, from ten to thirty drops, two or three times a day; in delirium tremens half a teaspoonful to a tablespoonful.

Ethereal Tincture of Digitalis.

℞. Digitalis, bruised, one part.
Spirit of ether, ten parts.

Macerate for eight days, express, and filter. *Ph. Germ.*

℞. Powdered digitalis, one part.
Spirit of ether, sp. gr. 0.76, sufficient.

Displace five parts. *Paris Codex.*

The latter, apparently, is double the strength of the former, but contains more ether, which does not dissolve digitalin. Dose, ten to twenty grains.

℞. Digitalis, bruised, one ounce and a half.
Spirit of nitrous ether, two pints.

Macerate for ten days, and filter. Dose, twenty drops to a fl. drachm in some diuretic infusion, in dropsies. *Mettauer.*

Mixture of Tincture of Foxglove.

℞. Tincture of foxglove, one fl. drachm.
" opium, sixty drops.
Distilled water, two fl. ounces.

Mix. A teaspoonful, two or three times a day, in hemoptysis and incipient phthisis. *Ellis.*

Wine of Digitalis.

℞. Digitalis, three parts.
Alcohol, sp. gr. 0.914, six parts.

Macerate for twenty-four hours, and add

Good white wine, one hundred parts.

Macerate for ten days, express, and filter. *Paris Codex.*

A tablespoonful represents about six and a half grains digitalis.

Vinegar of Digitalis.

℞. Digitalis, cut, one part.
Distilled vinegar, nine parts.
Alcohol, one part.

Macerate for eight days, express, and filter. *Ph. Germ.*

A teaspoonful, several times a day. Highly spoken of in incipient phthisis.

Ointment of Foxglove.

℞. Extract of digitalis, one part.
Simple ointment, nine parts.

Mix thoroughly. *Ph. Germ.*

℞ Bruised foxglove leaves, one part.
Lard, two parts.

Melt over a slow fire, until all moisture is driven off, and strain. As an application to chronic ulcers. *Soubeiran.*

Plaster of Foxglove.

℞ Foxglove leaves, two drachms.
Vinegar, one fl. ounce.

Macerate, and evaporate to consistence of an extract, and add

Calomel, ten grains.
Elemi ointment, eight scruples.

Mix. In chronic glandular swellings. *Sundelin.*

Syrup of Digitalis.

℞ Tincture of digitalis, one part.
Simple syrup, forty parts.

Mix tincture with one-tenth of hot syrup, evaporate alcohol, and mix with remainder. A tablespoonful represents one and a half grains of digitalis. *Paris Codex.*

℞ Digitalis bruised, four troy-ounces.
Water, sufficient.
Sugar, one pound.

Exhaust, by process of displacement, evaporate in a water-bath to ten ounces, add sugar, and form syrup. One teaspoonful is equivalent to fifteen grains of digitalis, or about two ounces of infusion. *Duhamel.*

DIGITALINUM.

Digitalin.

℞ Digitalis in powder,
No. 50, forty-eight troyounces.
Stronger alcohol, six pints.
Water, two pints.

Displace powder slowly with mixed liquids, afterwards with diluted alcohol, to obtain eight pints of tincture. Distil off six pints and a half, to residue add half a fl. ounce acetic acid, and two drachms purified animal charcoal, and after twenty-four hours, filter. Neutralize filtrate nearly with ammonia, then precipitate with tannin (four drachms dissolved in half a pint of water), filter, wash precipitate with little water, mix with two drachms levigated oxide of lead, and dry. Powder residue, add one drachm animal charcoal, digest with three ounces stronger alcohol for one hour at 160°, pass through small filter, wash with three ounces of warm alcohol, evaporate filtrate, powder residue, wash twice with half a fluidounce of strong ether, and dry the powder. *U. S. Ph.*

This is essentially the process of *Brit. Ph.*

Paris Codex obtains from two hundred parts of leaves, by displacement with cold water, six hundred parts of infusion of at least 1.05 sp. gr. This is precipitated by slight excess (fifty parts) of solution of subacetate of lead, the filtrate precipitated by (eight parts) carbonate of sodium, then by (four parts) ammonio-phosphate of sodium, and the filtrate by an excess (eight parts) of tannin; the precipitate is collected, while moist, mixed with five parts oxide of lead, dried, powdered, and exhausted with alcohol; the solution is decolorized by animal charcoal (one part), evaporated, residue washed with little distilled water, drained, dissolved in boiling alcohol, and evaporated. Residue is again dissolved in hot alcohol, evaporated, washed with cold water, redissolved in alcohol, and evaporated. Residue is treated with chloroform, and this solution evaporated spontaneously, when pure digitalin is left. This is about twice more active, than that which has not been treated with chloroform. *Paris Codex.*

Yellowish-white powder, inodorous (of peculiar aromatic odor, *Paris Codex*), and very bitter; nearly insoluble in cold water and pure ether, easily soluble in alcohol (and in chloroform, *Codex*); its solution in muriatic acid is yellow, soon becoming green.

Dose, one-sixtieth to one-thirtieth of a grain, very carefully increased.

Hypodermic Injection of Digitalin.

℞ Digitalin, one grain.
Glycerin,
Water, of each, two fl. drachms.

Dissolve. Four drops are equal to about one-sixtieth of a grain. *Ullersperger.*

Pills of Digitalin.

℞ Digitalin, three-quarters of a grain.
Powdered gum Arabic,
Mucilage of gum Arabic, each, sufficient.

Mix, and make twenty pills. Dose, one to four daily, in hypertrophy of the heart. *Bouchardat.*

℞ Digitalin, three-quarters of a grain.
Powdered squill,
" scammony, each, seventy-five grains.
Syrup of gum Arabic, sufficient.

Rub well together, and divide into one hundred pills. Give two pills, then four, and afterwards six daily, in dropsy with disordered circulation. *Falken.*

Granules of Digitalin.

℞. Digitalin, fifteen and a half grains.
Sugar, one ounce and a half.
Gum water, sufficient.

Mix, and form one thousand granules. Dose, from four to six a day. *Homolle.*

DIOSPYROS.

Persimmon.

The Persimmon, or *Diospyros Virginiana*, is a native tree, found in the middle and southern States; most frequently in the latter.

Sex. Syst. Diœc. octand. *Nat. Syst.* Ebenaceæ.

Linn. Sp. Pl. 1510. Griffith, Med. Bot. 435.

Several parts of the Persimmon have been used in medicine, as the bark and the unripe fruit. They are both powerful astringents, and have been employed with success in bowel complaints and hemorrhages. The bark may be given in infusion; the fruit in syrup or vinous tincture.

Infusion of Persimmon Bark.

℞. Persimmon bark, bruised, half an ounce.
Boiling water, one pint.

Macerate for two hours, and strain.

Used in doses of a fl. ounce, in intermittents, and as a gargle in ulcerated sore throat.

Wine of Persimmons.

℞. Crushed green persimmons, one pound.
Port wine, one pint and a half.

Macerate for fourteen days, strain, and filter. Dose, two to four fl. drachms a day, as an astringent. *Beasley.*

DIRCA.

Leatherwood.

The *Dirca palustris* is an indigenous shrub found in boggy situations, with long, tough roots.

Sex. Syst. Octand. monog. *Nat. Syst.* Thymelaceæ.

Linn. Amœn. iii. 12. Griffith, Med. Bot. 561.

The part used is the bark, which is very fibrous; it causes redness and vesication, when applied to the skin; when chewed, it induces salivation. It has been given in infusion or decoction, as a sudorific and expectorant, and also in the same class of diseases as mezereon.

DRACONTIUM.

Skunk Cabbage.

A perennial plant, with very large leaves, indigenous to the United States, growing in wet situations. It is the *Symplocarpus fœtidus* or *Dracontium fœtidum.*

Sex. Syst. Tetrand. monog. *Nat. Syst.* Orontiaceæ.

Linn. Sp. 1372 (Dracontium). Griffith, Med. Bot. 619.

The root is officinal, but the seeds are equally powerful. They both have a very acrid taste when fresh. The leaves, when bruised, have a nauseous smell, and are a good stimulating application to blisters. The root and seeds are stimulant, antispasmodic, and narcotic; and have been employed with success in asthma, hysteria, etc. The dose in powder is from two to twenty grains, several times a day.

Infusion of Skunk Cabbage Root.

℞. Skunk cabbage root, one ounce.
Boiling water, one pint.

Infuse in a covered vessel for an hour, and strain. Dose, an ounce to two ounces.

Tincture of Skunk Cabbage Root.

℞. Skunk cabbage root, sliced, one ounce.
Alcohol, six fl. ounces.

Macerate for fourteen days, and strain. *Turner.*

Tincture of Skunk Cabbage Seed.

℞. Skunk cabbage seed, two drachms.
Alcohol, four fl. ounces.

Macerate for fourteen days, and strain. *Turner.*

DULCAMARA.

Bittersweet.

The Bittersweet, or *Solanum dulcamara*, is a climbing shrub, indigenous to Europe, and naturalized extensively in this country.

Sex. Syst. Pentand. monog. *Nat. Syst.* Solanaceæ.

Linn. Sp. Pl. 264. Griffith, Med. Bot. 480.

The officinal portions are the young branches. These have a heavy, unpleasant odor, when fresh, but are scentless when dry. They have a somewhat bitter taste, followed by a peculiar sweetness. The properties of Bittersweet are those of a narcotic, diuretic, diaphoretic, and alterative. It has been used in chronic rheumatism, asthma, etc., and especially in chronic cutaneous disorders. The dose, in substance, is from thirty grains to a drachm; but it is seldom given in this form.

Decoction of Bittersweet.

℞ Bittersweet, bruised, one troyounce.
Water, sufficient.

Boil with a pint of water for 15 minutes, strain, and add sufficient water through the strainer to obtain a pint. *U. S. Ph.*

Dose, from one to two fl. ounces, three or four times a day, gradually increased till a pint is taken in the twenty-four hours. In chronic eruptions, etc.

Compound Decoction of Bittersweet.

℞ Bittersweet, half an ounce.
Liquorice root, Burdock, Sassafras bark, Guaiacum, each, two drachms.
Water, two pints.

Boil down to sixteen ounces, and strain. Dose, one to two fl. ounces, several times a day, in chronic rheumatism, and venereal affections. *Augustin.*

Infusion of Dulcamara.

℞ Dulcamara, one ounce.
Boiling distilled water, ten ounces.

Infuse for one hour and strain. Used like the preceding. *Brit. Ph.*

Extract of Bittersweet.

℞ Bittersweet, in powder, No. 50, twelve troyounces.
Diluted alcohol, sufficient.

Displace until the tincture passes but slightly impregnated with the properties of the bittersweet. Distil to one-half, strain, and evaporate to proper consistence. *U. S. Ph.*

Dose, from five to ten grains.

Paris Codex prepares this extract by displacement with cold water and removing the albumen by heating the infusion; *Ph. Germ.* directs digestion for six hours.

Fluid Extract of Bittersweet.

℞ Bittersweet, in powder, No. 50, sixteen troyounces.
Glycerin, three fluidounces.
Alcohol, half a pint.
Water, five fluidounces.

Moisten the powder with six fluidounces of the mixed liquids, pack into a suitable percolator, add the remaining liquid, and when all has been absorbed, macerate for four days; then displace with diluted alcohol twenty-four fl. ounces, reserve the first fourteen fluidounces, add to the remainder one fluidounce of glycerin, evaporate to two fluidounces, and mix with the reserved portion. *U. S. Ph.*

Syrup of Bittersweet.

℞ Powdered bittersweet, four ounces.
Water, twelve fl. ounces.
Alcohol, four fl. ounces.

Mix the fluids, pour on the powder in a displacer, until one pound of tincture is obtained, adding water to displace the diluted alcohol. Evaporate to half a pint, add fifteen ounces of sugar, and make a syrup. *W. Procter.*

Dose, a tablespoonful. This is more than double the strength of the syrup of *Paris Codex*, which makes it from a hot aqueous infusion.

Pills of Extract of Bittersweet.

℞ Extract of bittersweet, one ounce.
Crude antimony, Powder of bittersweet, each, half an ounce.

Mix, and form pills of two grains each. Dose, from fifteen to twenty, twice a day, in obstinate cutaneous affections. *Radius.*

Mixture of Bittersweet.

℞ Extract of bittersweet, three drachms.
" seneka, two drachms.
" conium, one drachm.
Antimonial wine, Cinnamon water, each, one fl. ounce.

Mix. Forty to eighty drops, four times a day, in scrofulous swelling, spasmodic cough, etc. *Augustin.*

℞ Extract of bittersweet, half a scruple.
Infusion of liquorice, Decoction of mallows, each, one ounce and a half.
Wine of opium, two drops.
Oxymel, three drachms.

Mix. A teaspoonful, in chronic catarrh in children. *Radius.*

E.

ELATERIUM.

ELATERIUM

Is a peculiar substance deposited by the lightly expressed and strained juice of the fruit of *Momordica elaterium* or *Ecbalium agreste*, a native of the south of Europe, growing in waste places.

Sex. Syst. Monœc. monad. *Nat. Syst.* Cucurbitaceæ.

Griffith, Med. Bot. 305.

Elaterium is in light, friable, thin, somewhat curled flakes or fragments, of a pale, grayish-green color. The taste is acrid, and bitterish; but the odor is very slight. The dose is from one to two grains, of the common commercial kind; of the pure and genuine, not more than one-eighth to a quarter of a grain.

Elaterium Pills.

℞. Elaterium, ten grains.
Extract of gentian, three drachms.

Mix, and form pills of four grains each. One or two, twice a day, as a hydragogue purgative. *Saunders.*

℞. Elaterium, six grains.
Extract of gentian,
Soap, each, nine grains.

Mix, and form twelve pills. One to four in obstinate constipation. *Radius.*

℞. Elaterium, half a drachm.
Aloes,
Gamboge, each, two drachms.
Ammoniac, two ounces.
Tincture of wormwood, sufficient.

Mix, and form pills of four grains each. *Swed. Ph.*

℞. Elaterium, fifteen grains.
Sulphate of potassium, one scruple.
Soap, one drachm.
Powdered ginger,
one drachm and a half.

Rub the elaterium and sulphate of potassium together, and then with the ginger and soap, adding sufficient water to form mass, and make sixty pills. One or two every hour, until full evacuations are procured. *Sprague.*

℞. Elaterium, one grain.
Compound extract of
colocynth, forty grains.
Extract of hyoscyamus,
twelve grains.

Mix, and form twelve pills. One at night. *Kilgour.*

Elaterium Mixture.

℞. Elaterium, one grain.
Spirit of nitrous
ether, two fl. ounces.
Tincture of squill,
Oxymel of colchicum,
each, half a fl. ounce.
Syrup, one fl. ounce.

Mix. A teaspoonful three or four times a day, in a little water. In ascites, or hydrothorax. *Ferriar.*

℞. Elaterium, one grain.
Parsley water, six fl. ounces.
Oxymel of squill,
Syrup of buckthorn, each, half a fl. ounce.
Roob of juniper, one ounce.
Aromatic tincture, one drachm.
Spirit of nitrous ether, two fl. drachms.

Mix. Used as above, and in the same cases. *Hufeland.*

Oil of Elaterium.

℞. Fruit of elaterium, one part.
Oil of olives, two parts.

Digest in a water-bath, for some days, then evaporate all moisture, and strain. As an application for sore nipples, frosted limbs, and painful hemorrhoids. *Lond. Ph.*

ELATERINUM.

ELATERIN.

℞. Juice of ecbalium, at will.

Treat with water, dissolve the residue in alcohol, evaporate to consistence of syrup, purify the crystals that form by washing with ether. Dose, one-sixteenth of a grain.

Tincture of Elaterin.

℞. Elaterin, one grain.
Alcohol, one ounce.
Nitric acid, four drops.

Mix. Dose, twenty to forty drops, in cinnamon water. *Morris.*

ELEMI.

Elemi.

Elemi is a resinous exudation of various species of plants, principally belonging to the natural order of Amyridaceæ. It occurs in masses of various consistence and color, but usually diaphanous; it has a terebinthinate and somewhat aromatic odor, and a warm unpleasant taste. It has the usual properties of the turpentines, but is only employed as an external application. It is seldom used in this country, but is extensively employed in Europe.

Ointment of Elemi.

℞ Elemi,
Venice turpentine,
Suet,
Lard, } each, equal parts.

Melt carefully together, and strain. *Ph. Germ.*

℞ Elemi, one part.
Simple ointment, four parts.

Melt, strain through flannel, and stir until it solidifies. *Brit. Ph.*

Elemi Plaster.

℞ Burgundy pitch, eight parts.
Elemi, two parts.
Common turpentine,
Oil of bayberries, each, one part.

Melt together and strain. *Paris Codex.*

As an active stimulant to flabby ulcers, etc.

Elemi Cautery Plaster.

℞ Elemi,
Spermaceti, each, five parts.
Turpentine, six parts.
White wax, ten parts.

Melt together, and spread on paper. To keep up discharge from issues. *Soubeiran.*

EMETIA.

Emetina.

This is a peculiar alkaloid, found in the various kinds of ipecacuanha, and to which they owe their active properties. There are two varieties, the colored or impure, and the white or pure. The latter is seldom met with.

Impure Emetina.

℞ Ipecacuanha, in coarse powder,
Stronger alcohol, each, sufficient.

Exhaust the powder by maceration or displacement, distil, and evaporate to a syrupy consistence, mix with water, filter, and evaporate carefully to dryness. *Cottereau.*

It is reddish-brown, inodorous, bitter, and deliquescent. Dose, half a grain to one grain.

This is the extract of ipecacuanha of some pharmacopœias.

Pure Emetina.

℞ Impure emetina, at will.

Dissolve in water, treat with magnesia, wash with cold water, treat several times with alcohol, on a water-bath, evaporate the solution to dryness, dissolve the residues in very dilute sulphuric or acetic acid, boil with a little animal charcoal, add an alkaline solution to saturate the acid, dry the precipitate, dissolve it in alcohol, and evaporate to dryness. *Cottereau.*

It is yellowish, or white, pulverulent, not deliquescent. Dose, $\frac{1}{16}$th to $\frac{1}{4}$th of a grain.

Emetine Mixture.

℞ Impure emetina, four grains.
Infusion of orange leaves, two fl. ounces.
Syrup of orange flowers, half a fl. ounce.

Mix. A dessertspoonful every half hour, to produce vomiting. *Magendie.*

℞ Pure emetina dissolved in nitric acid, one grain.
Infusion of linden, three fl. ounces.
Syrup of mallow, one fl. ounce.

Mix. Given as the last. *Foy.*

Emetine Lozenges.

℞ Impure emetina, thirty-two grains.
Sugar, two ounces.
Mucilage of tragacanth, sufficient.

Rub together, and form lozenges of ten grains. One will usually vomit a child, and three or four an adult. *Magendie.*

℞ Impure emetina, thirty-two grains.
Sugar, four ounces.
Mucilage of tragacanth, sufficient.

Mix, and form lozenges of nine grains each. One occasionally as an expectorant. *Guibourt.*

Syrup of Emetina.

℞ Impure emetina, sixteen grains.

Dissolve in a little water, filter, and add

Syrup, one pound.

℞. Pure emetina, four grains.
Syrup, one pound.
Mix. The dose of these syrups is a teaspoonful. *Soubeiran.*

ERGOTA.

Ergot.

Ergot is the sclerotium of a fungus, called *Clavicepspurpurea*, which replaces the grain of the common rye. Ergot is one of the few articles that act specifically on the uterus, increasing its contractile energy; and its principal use is as a stimulant to uterine action in labor, and also to check hemorrhage from that organ; but it has been employed in a variety of other diseases, and especially, externally, as a styptic. The dose, in substance, to aid labor, is from fifteen to twenty grains, to be repeated every twenty minutes, till the desired effect is produced, or till a drachm is taken.

Infusion of Ergot.

℞. Ergot, fifty-five grains.
Boiling water, five fl. ounces.
Infuse. One to two fl. ounces as a dose, to be repeated every twenty minutes.
Brit. Ph.

℞. Ergot, half a drachm.
Boiling water, one fl. ounce and a half.
Infuse for half an hour, and strain. To be repeated every four hours. *Ramsbotham.*

Fluid Extract of Ergot.

℞. Ergot, in powder, No. 50, sixteen troyounces.
Glycerin, three fl. ounces.
Alcohol, eight fl. ounces.
Water, five fl. ounces.
Mix the liquids, moisten the powder with four fl. ounces of the mixture, pack into a percolator, add the remaining liquid, and macerate for four days; then displace with diluted alcohol twenty-four fl. ounces, reserve the first fourteen fl. ounces, add to the remainder half a fl. ounce of acetic acid and one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with the reserved portion. *U. S. Ph.*

℞. Ergot, in coarse powder one pound (avoir.).
Washed ether, sufficient.
Distilled water, three pints (imp.).
Alcohol, eight fl. ounces.
Place the ergot in a percolator and remove the oil by passing the ether slowly through it. Digest the marc in the water at 160° for twelve hours. Press out, strain, and evaporate by a water-bath to nine fl. ounces; when cold add the alcohol and, after an hour, filter. *Brit. Ph.*
Dose, ten to twenty minims.

Wine of Ergot.

℞. Fluid extract of ergot, four fl. ounces.
Sherry wine, twenty-eight fl. ounces.
Mix and filter. *U. S. Ph.*
Dose, in labor, two to three fl. drachms; for other purposes, one to two fl. drachms.

Syrup of Ergot.

℞. Ergot, powdered, five parts.
White wine, thirty-six parts.
Macerate for four days, express, filter, and dissolve in thirty parts of the filtrate
Sugar, fifty parts.
One troyounce contains about thirty grains of ergot. *Guibourt.*

℞. Ergot, twenty grains.
Extract of opium, three-quarters of a grain.
Syrup, eight fl. ounces.
Mix. Dose, one fl. ounce, occasionally, in engorgement of the uterus. *Lisfranc.*

Tincture of Ergot.

℞. Ergot, five ounces (avoir.).
Diluted alcohol, sufficient.
Obtain by maceration and displacement one pint (imp.). Dose, twenty drops to a fl. drachm. *Brit. Ph.*

℞. Ergot, bruised, one part.
Alcohol, 60 per cent., five parts.
Macerate for ten days, strain, express, and filter. *Paris Codex.*
The tincture of *Ph. Germ.* is one-half the strength of the preceding.

Ethereal Tincture of Ergot.

℞. Powdered ergot, two ounces.
Spirit of nitrous ether, one pint.
Digest for ten days and filter. Used in uterine hemorrhages. Dose, one fl. drachm. *Mettauer.*

Compound Powder of Ergot.

℞. Powdered ergot, two scruples.
" cubebs, one ounce.
" cinnamon, half a drachm.
" sugar, one drachm.

Mix, and divide into eight powders; one to be taken, three or four times a day, in leucorrhœa or gleet. *Ryan.*

Ergot Mixture.

℞. Powdered ergot, half a drachm.
Syrup, half a fl. ounce.
Mint water, one fl. ounce.

Mix. One-third to be taken at a dose, and repeated every twenty minutes; to aid labor. *Soubeiran.*

℞. Powdered ergot, one drachm.
Syrup, three fl. ounces.
Tincture of opium, twenty drops.
Essence of bergamot, six drops.

Mix. A spoonful, to be repeated as may be required. *Pierquin.*

℞. Fluid extract of ergot, two fl. drachms.
Tincture of digitalis, two fl. drachms.
Gallic acid, one drachm.
Compound infusion of rose, six fl. ounces.

Mix. Dose, one to two tablespoonfuls, in pulmonary hemorrhage. *Dobell.*

℞. Tincture of ergot, thirty minims.
Syrup of saffron, half a fl. ounce.
Compound decoction of aloes, one fl. ounce and a half.

Mix. Dose, a teaspoonful thrice daily. *Tilt.*

Ergot Clyster.

℞. Powdered ergot, one to three drachms.
Water, twelve fl. ounces.

Boil for ten minutes, and strain. As an enema, to aid labor. *Foy.*

Compound Ergot Pills.

℞. Powdered ergot, half a drachm.
Extract of gentian, one drachm.

Rub together, and make fifteen pills. In dysmenorrhœa. One pill to be taken three times a day. *Dewees.*

Ergot Injection.

℞. Powdered ergot, half an ounce.
Boiling water, half a pint.

Infuse, and strain. As an injection in erythema of the vagina and urethritis. *Desruelles.*

Extract of Ergot, or Ergotine.

℞. Powdered ergot, one part.
Water, sufficient.

Exhaust the ergot by the process of displacement; heat the solution on a water-bath, filter, and evaporate to consistence of syrup; add one part of alcohol to precipitate gummy principles; permit to rest, filter, and evaporate to consistence of soft extract. *Ph. Germ.*

This was recommended by Bonjean, and is said to be very efficacious in hemorrhages, in doses of two grains every two hours; also applied as a styptic to bleeding vessels.

Ergotine Mixture.

℞. Extract of ergot, fifteen grains.
Syrup of orange flowers, one fl. ounce.
Water, three fl. ounces.

Mix. A tablespoonful, every quarter of an hour, in uterine hemorrhage. Dose to be increased, if requisite. *Bonjean.*

Pills of Ergotine.

℞. Extract of ergot, one drachm.
Powdered liquorice root, sufficient.

Mix, and make fifty pills. Dose, six to ten a day. *Bonjean.*

Oil of Ergot.

℞. Powdered ergot, at will.
Ether, sufficient.

Exhaust ergot by process of displacement; evaporate result by a gentle heat. *Wright.*

Dose, from twenty to fifty drops, in some appropriate vehicle, in parturition, etc. In doses of ten drops, every three hours, in diarrhœa, gastric irritability, etc.

Hydro-Alcoholic Extract of Ergot.

℞. Powdered ergot,
Ether, equal weights.

Extract the oil from the ergot by the ether in a percolator. Digest the residue with six times its weight of water, for two days, at 167° F. Decant, evaporate to one-fourth, and add alcohol as long as a precipitate

takes place. Filter the liquid and evaporate to consistence of honey. Treat the residue of the ergot with its original weight of alcohol, digest for three days, express, and filter. Finally mix the aqueous and alcoholic products, and evaporate to the consistence or a thick extract. *Stickel.*

Dose, five to ten grains.

ERIGERON.

1. ERIGERON CANADENSE.

Canada Fleabane.

A common native plant, with numerous white flowers, found in waste places, in the Northern and Middle States.

Sex. Syst. Syngen. super. *Nat. Syst.* Asteraceæ.

Willd. Sp. Pl. iii. 1954. Torrey & Gray, Fl. ii. 175.

The leaves and tops are used; it has a rather pleasant smell, and a bitterish, acrid, somewhat astringent taste. It is said to be diuretic, tonic, and astringent, and to be useful in dropsies and diarrhœa. Dose, in substance, thirty grains to a drachm.

Infusion of Canada Fleabane.

℞. Canada fleabane, one ounce.
Boiling water, one pint.

Infuse. Dose, two to four fl. ounces. *Dupuy.*

Fluid Extract of Canada Erigeron.

℞. Canada erigeron, in powder, No. 40, sixteen troyounces.
Alcohol, sufficient.

Moisten powder with five fl. ounces, and after packing firmly in a percolator, add eleven fl. ounces of alcohol, macerate for four days, displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, a teaspoonful.

Extract of Canada Fleabane.

℞. Canada fleabane, one pound.
Water, one gallon.

Boil down to four pints, filter, and evaporate to proper consistence. Dose, five to ten grains.

Oil of Erigeron.

℞. Fresh Canada erigeron, at will.
Water, sufficient.

Distil as long as oil passes over, and separate it from the water. *U. S. Ph.*

Dose, four to ten drops, in uterine hemorrhages.

Mixture of Oil of Erigeron.

℞. Oil of erigeron, a fl. drachm.
Sugar, two drachms.
Gum Arabic, one drachm.
Water, sufficient for three fl. ounces.

Make an emulsion. Dose, a teaspoonful three times a day. *E. Wilson.*

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2. ERIGERON HETEROPHYLLUM.

Fleabane.

This species, which has also been called *E. annuum*, is very closely allied to, and identical in properties with *E. Philadelphicum*. Both are common plants in the United States, and are now officinal under the name of *Erigeron*.

Persoon, Synop. ii. 431. Griffith, Med. Bot. 394.

The leaves and tops of the plants are used. They have a peculiar, but not unpleasant odor, when bruised, and an astringent, bitterish taste, and are employed as a diuretic, especially in dysuria of children.

Infusion of Fleabane.

℞. Fleabane, one ounce.
Boiling water, one pint.

Infuse. Dose, two to four fl. ounces, every three or four hours. *Dewees.*

ERYNGIUM.

1. ERYNGIUM MARITIMUM.

Sea Holly.

This plant is a native of Europe, growing on sandy beaches.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Linn. Sp. Pl. 337. Griffith, Med. Bot. 315.

It is thought to be diuretic, and was also esteemed aphrodisiac. The part used is the root, which has a sweet, agreeable taste, and an aromatic odor.

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2. ERYNGIUM AQUATICUM.

Button Snakeroot.

A native species, growing in wet places, from Virginia to Florida.

Linn. Sp. Pl. ed. 2, p. 336. Torrey & Gray, Fl. 1, 604.

The root is bitter, aromatic, and pungent. It is diaphoretic and expectorant, and is useful in the same cases to which senega is appropriate. Used to some extent in South Carolina.

EUCALYPTUS.

This is an interesting genus of Australian trees, of the natural order *Myrtaceæ*. Many yield volatile oils, astringent extracts, or resins, and will probably be employed medicinally in the future. At present two species have attracted attention, one, *E. resinifera*, yielding the so-called Botany Bay kino.

EUCALYPTUS GLOBULUS.

Blue Gum Tree.—Fever Tree.

Indigenous to Victoria and Tasmania, and cultivated in America and Southern Europe as an ornamental and shade tree. The leaves and the volatile oil obtained from them, have been used; the former are thick, leathery, several inches in length, of an agreeable odor, and an aromatic styptic taste. The volatile oil resembles oil of cajeput.

Dose of the leaves, one to four drachms; of the oil, one or two drops.

Infusion of Eucalyptus.

℞. Eucalyptus leaves, cut, two drachms.
Boiling water, four ounces.

Infuse and strain. Take morning and evening. *Chernovis.*

Tincture of Eucalyptus.

℞. Eucalyptus leaves, cut, one part.
Alcohol, 80 per ct., five parts.

Digest for five days, and filter. Dose, a tea- to a dessertspoonful. *Dorvault.*

Syrup of Eucalyptus.

℞. Distilled water of eucalyptus, fifty parts.
Sugar, ninety-five parts.

Dissolve. As an agreeable vehicle and corrective. *Dorvault.*

Extract of Eucalyptus.

℞. Eucalyptus leaves, cut, at will.

Distil the volatile oil with water; exhaust the residue in the still with water, prepare an extract, exhaust this with alcohol, evaporate to the consistence of an extract, and while cooling, stir in the volatile oil.

Dose, two to eight grains.

EUONYMUS.

Spindle Tree.

Two indigenous species have been used in medicine, *E. Americanus*, or strawberry tree, and *E. atropurpureus*, or wahoo. The latter is a tall shrub with elliptic ovate leaves, dark purple flowers, and copious crimson fruit, drooping on long peduncles.

Sex. Syst. Tetrand. monogyn. *Nat. Syst.* Celastraceæ.

The bark is the officinal part; it is of a grayish color, with black streaks externally, is without odor, and has a bitter taste, which is due to a neutral principle called euonymin. It acts as a cathartic, and is regarded to possess alterative properties. Dose, a scruple to a drachm, given in the form of infusion.

EUPATORIUM.

Boneset.

This, the *E. perfoliatum*, is a native plant, found in abundance in most parts of the United States, in moist situations. Several other native species are almost identical in their properties, as *E. teucrifolium*, *E. aromaticum*, etc.

Sex. Syst. Syngen. æqual. *Nat. Syst.* Asteraceæ.

The parts used are the leaves and tops. These have a faint odor, and a peculiar, bitter taste. It is tonic and diaphoretic, and, in large doses, emetic and laxative. Dose, in substance, as a tonic, twenty to thirty grains.

Infusion of Boneset.

℞. Boneset, one ounce.
Boiling water, one pint.

Infuse for two hours, in a covered vessel, and strain. *U. S. Ph.*

As a diaphoretic, to be taken freely, warm; as a tonic, a fl. ounce, cold.

Decoction of Boneset.

℞. Boneset, one ounce.
Water, one pint and a half.

Boil down to a pint.

Dose, a wineglassful, or more, as an emetic and cathartic.

Compound Infusion of Boneset.

℞. Boneset,
Sage, each, half an ounce.
Cascarilla, one drachm.
Boiling water, one pint and a half.

Infuse till cold, and strain. A wineglassful every three or four hours. In hectic fever. *Ellis.*

EUPHORBIA.

SPURGE.

1. EUPHORBIA COROLLATA.

BOWMAN'S ROOT.

A native plant, with numerous white flowers, found in many parts of the United States, in dry, sandy soils.

Sex. Syst. Dodecand. trigyn. *Nat. Syst.* Euphorbiaceæ.

Linn. Sp. Pl. 258. Griffith, Med. Bot. 592.

The root, which is the part used, is large, white internally, inodorous, and almost tasteless. It is a safe and certain emetic, in doses of fifteen or twenty grains, and diaphoretic in that of three or four grains.

2. EUPHORBIA IPECACUANHA.

WILD IPECACUANHA.

This is also a native plant, with numerous procumbent stems, and variously-shaped leaves.

Linn. Sp. Pl. 653. Griffith, Med. Bot. 592.

The root, the part used, is large, white, almost inodorous, and has a somewhat sweet taste. It is an energetic emetic, but, like the last species, apt to act on the bowels. Dose, ten to fifteen grains.

Compound Powder of Wild Ipecacuanha.

℞. Powdered wild ipecacuanha,
" opium, each, six grains.
Sulphate of potassium, forty-eight grains.

Triturate well, and divide into six powders. As a substitute for Dover's powder, to which it is equal, if not superior.

W. P. C. Barton.

3. EUPHORBIA HYPERICIFOLIA.

BLACK PURSLANE.

A small, procumbent, native plant, with leaves often marked with a purple spot.

Linn. Sp. Pl. 652. Griffith, Med. Bot. 593.

The whole plant is used, and is said to be astringent and narcotic. It is inodorous, but has a sweetish, somewhat austere taste. It has been recommended in diarrhœa, fluor albus, etc.

Infusion of Black Purslane.

℞. Dried black purslane, half an ounce.
Boiling water, one pint.

Infuse for half an hour, and strain. Dose, in dysentery and diarrhœa, a tablespoonful every hour, till the morbid symptoms yield, then less frequently; in menorrhagia and leucorrhœa, a wineglassful, three times a day.

Zollickoffer.

4. EUPHORBIA LATHYRIS.

MOLE PLANT.

A tall species, native of Europe, but often cultivated in this country.

Linn. Sp. Pl. 655. Lindley, Flor. Med. 194.

The seeds, which are the officinal portion, yield to ether, a purgative oil, which is tasteless, and almost inodorous. It acts on the bowels, in doses of from four to twelve drops, but is apt to cause nausea and vomiting.

Mixture of Oil of Euphorbia.

℞. Oil of euphorbia, eight drops.
Powdered gum Arabic, one drachm.
Sugar, two ounces.
Distilled water, three fl. ounces.

Mix. As a purgative draught.

Pichonnier.

EUPHORBIUM.

EUPHORBIUM

Is the concrete gum-resinous exudation of *Euphorbia resinifera*, and perhaps obtained from several succulent species, principally natives of Africa. It is in the form of tears, or small, irregular masses, of a yellowish or reddish color. The taste is at first slight, but soon becomes acrid and burning; the odor is very faint. It is a violent emetic and purgative, and is not used internally; as an external application it is employed in Europe, and also as a sternutatory.

Sternutatory of Euphorbium.

℞. Powdered euphorbium, one drachm.
" white hellebore, four scruples.

Mix. Very violent in its action.

Pierquin.

Tincture of Euphorbium.

℞. Euphorbium, bruised, one part.
Alcohol, five parts.

Digest for eight days. As a rubefacient.

Ph. Germ.

Oil of Euphorbium.

R. Euphorbium, one part.
Olive oil, ten parts.

Digest for ten days, and filter. As a friction in paralysis. *Van Mons.*

Plaster of Euphorbium.

R. Burgundy pitch, sixteen parts.
Turpentine, three parts.

Melt together, and add

Powdered euphorbium, four parts.

Stir till cold. Stimulating and rubefacient. This is a simplified formula for the preparation formerly known as *capuchin ointment.* *Hager.*

EUPHRASIA.

EYEBRIGHT.

The *Euphrasia officinalis* is a small, annual plant, a native of Europe and the northern parts of Asia and America.

Sex. Syst. Didynam. gymnos. *Nat. Syst.* Scrophulariaceæ.

Linn. Sp. Pl. 841. Lindley, Flor. Med. 506.

The whole plant is used. It is slightly bitter and aromatic, and, at one time, was much used in diseases of the eyes. Dr. Kranichfeld says it is peculiarly beneficial in catarrhal ophthalmia, and also in cough and other catarrhal affections.

F.

FEL BOVINUM.

OX GALL.—OX BILE.

A greenish-yellow viscous liquid, obtained from the gall-bladder of the ox. It has a peculiar odor, and a disagreeable bitter taste.

Fel Bovinum Purificatum.

R. Fresh ox bile, one pint.
Alcohol, two pints.

Mix well, and, after twelve hours, decant the clear solution and evaporate it by a water-bath, to a pilular consistence. Dose, five to ten grains. *Brit. Ph.*

Ph. Germ. treats the alcoholic solution with animal charcoal, and evaporates to dryness.

Used in some forms of dyspepsia, functional diseases of the liver, etc.; usually combined with other medicines.

FERMENTUM CEREVISIÆ.

BEER YEAST.

It is a viscid, thick, frothy liquid, exhibiting under the microscope numerous round or oval confervoid cells. It is stimulant and antiseptic, in doses of one to two tablespoonfuls, but is chiefly used externally.

Mixture of Yeast.

R. Beer yeast, ten fl. ounces.
Camphor, thirty grains.
Spirit of nitrous ether, half a fl. ounce.

Mix. Dose, a fluidounce every hour or two. Recommended in typhus and typhoid fevers. *Lamprey.*

Yeast Poultice.

R. Beer yeast, six fl. ounces.
Wheaten flour, fourteen ounces.
Water at 100°, six fl. ounces.

Mix the yeast and the water, stir in the flour, and place the mass near the fire till it rises. *Brit. Ph.*

Used in fetid and gangrenous ulcers.

FERRUM.

IRON.

A solid, hard, malleable, ductile metal, of a silvery-white color and fibrous texture, attracted by the magnet, of a slight styptic taste, and a faint but peculiar odor when rubbed. Oxidizable in the air, and when heated to whiteness, burning with great brilliancy. It is employed medicinally in a great number of forms, in the metallic state, as oxides and salts. All these are powerfully tonic and astringent.

FERRI FILUM.

IRON WIRE.

FERRI RAMENTA.

IRON FILINGS.

These should always be perfectly pure, when used internally, and in a state of minute division.

Ferri Pulvis.
Prepared Metallic Iron.

℞. Iron filings, at will.

Pound in an iron mortar, with great force, sift through a fine sieve, and porphyrize until all metallic brilliancy has disappeared, and again sift. Keep in a perfectly dry place. *Paris Codex.*

Dose, from five to twenty grains.

The following is preferable for medicinal use, it being much purer.

Reduced Iron.

℞. Place pure precipitated carbonate of iron on a tray of sheet-iron, in a tube of wrought iron; pass a stream of pure hydrogen through it, heat to a dull red, and maintain this for some hours, as long as the escaping hydrogen is accompanied by water. Then remove from the fire and keep up a small current of gas till cool. Should any portion of the product be black instead of iron-gray, separate it for use in a subsequent operation; reduce the gray portion to powder.

U. S. Ph.

Dose, two to five grains every three hours.

Powder of Metallic Iron.

℞. Prepared metallic iron, ten grains.
Sugar, one drachm.

Mix. To be given four times a day, in chlorosis and amenorrhœa. *Brera.*

Compound Powder of Metallic Iron.

℞. Prepared metallic iron,
Powdered guaiacum,
each, half a drachm.
Prepared oyster shell, half an ounce.
Sugar, three drachms.

Mix. Divide into ten powders; one, twice a day, in scrofula. *Gœlis.*

℞. Prepared metallic iron,
Powdered cinnamon,
each, half a drachm.
Sugar, three drachms.

Mix, and divide into twelve powders. One every three hours as a tonic. *Guibourt.*

℞. Prepared metallic iron, one grain.
Carbonate of magnesium, five grains.
Powdered cinnamon, two grains.
" sugar, one scruple.

Mix. One-half in the morning, the other in the evening, in rachitis. *Hufeland.*

℞. Prepared metallic iron, } each,
Powdered anise, } two
Castor, } drachms.
Powdered cinnamon,
" nutmeg, each, one drachm.

Mix, and divide into twenty-four powders. One, morning and evening, in chlorosis. *St. Marie.*

Bolus of Prepared Iron.

℞. Prepared metallic iron,
Powdered myrrh, each, ten grains.
Aromatic powder, two grains.
Powder of rosemary, half a drachm.
Syrup of orange-peel, sufficient.

Make a bolus. To be taken morning and evening, in amenorrhœa. *Augustin.*

Pills of Prepared Iron.

℞. Prepared metallic iron, two ounces.
Extract of wormwood, sufficient.

Mix, and make six-grain pills. Three or four, morning and evening, in chlorosis, dyspepsia, etc. *Soubeiran.*

℞. Prepared metallic iron, one drachm.
Powdered black hellebore, one scruple.
Extract of gentian, two drachms.
Syrup of saffron, sufficient.

Mix, and form sixty pills. Two, three times a day, as an emmenagogue. *St. Marie.*

℞. Prepared metallic iron, half an ounce.
Powdered colombo, four scruples.
" rhubarb,
" cinnamon,
each, two scruples.
Extract of quassia, sufficient.

Mix, and form pills of three grains each. Three to four a day, as a tonic in debility. *Jahn.*

Lozenges of Reduced Iron.

℞. Reduced iron, seven hundred and twenty grains.
Powdered sugar, twenty-five ounces.
" gum acacia, one ounce.
Mucilage of gum acacia, two fl. ounces.

Mix the powders, add the mucilage, and with water form a mass, which divide into 720 lozenges. Dose, one to six. *Brit. Ph.*

Wine of Iron.

℞. Iron wire (about No. 35), one ounce.
Sherry wine, twenty fl. ounces.

Macerate for thirty days in a closed vessel, the iron being not quite wholly immersed, the vessel frequently shaken, and the stopper removed; then filter. Dose, one to four fl. drachms. *Brit. Ph.*

Aromatic Mixture of Iron.

℞. Pale cinchona, in powder, one ounce.
Calumba, in coarse powder, half an ounce.
Cloves, bruised, a quarter of an ounce.
Fine iron wire, half an ounce.
Compound tincture of cardamom, three fl. ounces.
Tincture of orange-peel, half a fl. ounce.
Peppermint water, sufficient.

Macerate the solid substances with twelve fl. ounces of peppermint water for three days, agitating occasionally; then filter, adding as much peppermint water to the filter, to obtain twelve fl. ounces, and mix with the tinctures. Dose, one to two fl. ounces. *Brit. Ph.*

FERRI ACETAS.

Acetate of Iron.

℞. Hydrated oxide of iron,

Recently precipitated by ammonia and well washed with cold water, is digested with sufficient acetic acid for six hours at a temperature below 140°, then set aside for twelve hours, and the clear liquid decanted (not filtered) and evaporated between 140° and 188°. *Swiss Ph.*

It has a brown-red color, is freely soluble in water and alcohol, and contains about half its weight of oxide of iron.

Solution of Acetate of Iron.

℞. Solution of tersulphate of iron, ten parts.
Distilled water, thirty parts.

Mix, and precipitate with an excess of ammonia water previously diluted with twenty times its weight of distilled water. Wash the precipitate well, and express it in a strainer until it weighs five parts. Mix this in a bottle with

Acetic acid, sp. gr. 1.040, six parts.

Agitate occasionally in a cool place during two days, and filter.

The solution should weigh ten parts, has a specific gravity of 1.134 to 1.138, and contains 8 per cent. of iron. *Ph. Germ.*

Tincture of Acetate of Iron.

℞. Acetate of potassium, two ounces.
Solution of persulphate of iron, two and a half fl. ounces.
Rectified spirit, sufficient.

Dissolve the acetate in ten fl. ounces, and the iron solution in eight fl. ounces of alcohol. Mix and agitate repeatedly during an hour. Then filter and pass sufficient alcohol through the precipitate upon the filter to make the tincture measure one pint imperial. Dose, five to thirty minims. *Brit. Ph.*

℞. Liquid acetate of iron, one part.
Alcohol, 56 pr. ct., seven parts.

Digest for two days, and filter. Dose, ten to fifty drops. *Guibourt.*

Ethereal Tincture of Acetate of Iron.

℞. Liquid acetate of iron, nine parts.
Acetic ether, one part.
Alcohol, two parts.

Mix. Dose, twenty to thirty drops. *Ph. Germ.*

Acetate of Iron and Aluminum.

℞. Sulphate of iron, two parts.
Alum, one part.
Boiling water, ten parts.

Filter the solution, and gradually add solution of acetate of lead till precipitation ceases; let rest, and filter; evaporate to consistence of a jelly. As a marking ink; it resists alkalies, but not acids. *Guibourt.*

FERRUM AMMONIATUM.

Ammoniated Iron.

℞. Chloride of ammonium, sixteen parts.

Distilled water, thirty-two parts.
Liquid perchloride of iron, three parts.

Dissolve, mix, evaporate to dryness, and powder. *Ph. Germ.*

Said to be useful in amenorrhœa, scrofula, epilepsy, etc. Dose, four to twelve grains, several times a day.

Compound Powder of Ammoniated Iron.

℞. Ammoniated iron, five grains.
Ammoniac, three grains.
Powdered seneka, five grains.
" liquorice, one drachm.

Mix, and divide into twelve powders. One, every three hours, in gonorrhœa. *Foy.*

Bolus of Ammoniated Iron.

℞. Ammoniated iron, five grains.
Aromatic powder, twelve grains.
Mucilage, sufficient.

Mix, and make bolus. One to be taken twice a day, in chlorosis and scrofula. *Ainslie.*

Pills of Ammoniated Iron.

℞. Ammoniated iron,
Galbanum, each, one drachm.
Assafetida, two drachms.
Castor, one scruple.
Tincture of valerian, sufficient.

Beat into mass, and form pills of three grains. Two, morning and evening, in atonic nervous disorders. *Radius.*

℞. Ammoniated iron,
Aromatic powder,
Ext. of Peruvian bark,
Alum, each, half a drachm.
Oil of cinnamon, twelve drops.

Beat into mass, and form pills of two grains. Five to ten, morning and evening, in asthenic menorrhagia. *Forney.*

Mixture of Ammoniated Iron.

℞. Powdered galanga,
" rhubarb, each, half a drachm.
Boiling water, sufficient

to obtain three ounces of strained solution; add

Ammoniated iron, six grains.
Peppermint sugar, four drachms.

Mix. A dessertspoonful, every three hours, in indigestion and chronic diarrhœa of children. *Wendt.*

FERRI ARSENIAS.

Arseniate of Iron.

℞. Sulphate of iron, nine ounces.
Arseniate of sodium, dried at 300°, four ounces.
Acetate of sodium, three ounces.

Dissolve the two sodium salts in two pints, and the iron salt in three pints of water; mix the solutions, wash the precipitate well, squeeze out the water, and dry it at 100°. *Brit. Ph.*

A greenish, tasteless powder, soluble in the stronger acids. Dose, one-sixteenth to half a grain.

Pills of Arseniate of Iron.

℞. Arseniate of iron, three grains.
Extract of hops, two drachms.
Powdered marshmallow, thirty grains.
Syrup, sufficient.

Mix, and make into forty-eight pills. Dose, one or two daily, in scrofulous, herpetic, and cancerous affections. *Biett.*

Ointment of Arseniate of Iron.

℞. Arseniate of iron, half a drachm.
Phosphate of iron, two drachms.
Spermaceti cerate, six drachms.

Triturate together. As an application to cancerous ulcers. To be used with great caution. *Carmichael.*

FERRI BROMIDUM.

Bromide of Iron.

℞. Bromine, one part.
Distilled water, twenty parts.
Iron filings, sufficient.

Digest together; when the solution becomes greenish, filter, and evaporate to dryness. *Magendie.*

Dose, one to three grains in pills.

Syrup of Bromide of Iron.

℞. Bromine, nine drachms.
Iron (card teeth), four drachms and a half.
Sugar, ten troyounces.
Water, sufficient.

Mix the iron and bromine with five fluid-ounces of water, digest; when the color has changed to green, filter into a bottle containing the sugar, and wash the filter with water to make with the sugar one pint of syrup. Dose, ten to twenty minims. *W. S. Thompson.*

Pills of Bromide of Iron.

℞. Bromide of iron, twelve grains.
Conserve of roses, eighteen grains.
Gum Arabic, twelve grains.

Mix, and form twenty pills. Two, in the morning and evening, as a tonic and alterative. *Magendie.*

℞. Bromide of iron, one drachm.
Extract of liquorice, sufficient.

Mix, and make sixty pills. One or two, in the morning and evening, in scrofula, etc. *Radius.*

Ointment of Bromide of Iron.

℞. Bromide of iron, one drachm.
Bromine, twelve grains.
Lard, one ounce.

Mix. In frictions on the inside of the thighs, in amenorrhœa. *Cadet.*

℞. Bromide of iron, one part.
Glycerin, one part.
Lard, fourteen parts.

Mix thoroughly. As an application to scrofulous swellings. *Draper.*

FERRI CARBONAS.

Carbonate of Iron.

From the avidity with which protocarbonate of iron absorbs oxygen from the air and loses its carbonic acid, it is a very unstable preparation; and therefore what is usually prescribed under this name is merely a subcarbonate, or sesquioxide. By combination with saccharine matter, it, however, is protected from the oxidizing process, to a very great extent.

Saccharated Carbonate of Iron.

℞. Sulphate of iron, five parts.
Bicarbonate of sodium, four parts.
Powdered sugar, eight parts.
Water, sufficient.

Dissolve the iron salt in twenty, and the sodium salt in fifty parts of water, add the former solution slowly to the latter contained in a bottle, wash the precipitate by decantation, squeeze out the water, mix with the sugar, and dry it in a porcelain capsule upon a water-bath. *Ph. Germ.*

Brit. Ph. precipiates two ounces of sulphate of iron, with one and a quarter ounce of carbonate of ammonium, and mixes the precipitate with one ounce of sugar. It contains over forty per cent. carbonate of iron, and is twice the strength of the former.

Dose, from five to twenty grains.

Effervescent Ferruginous Powder.

℞. Bicarbonate of sodium, sixty parts.
Sulphate of iron, three parts.
Tartaric acid, eighty parts.
Sugar, two hundred and sixty parts.

Mix together, the tartaric acid being in rather coarse powder. *Paris Codex.*

Twenty grammes yield with one litre of water a suitable effervescing solution.

Pills of Carbonate of Iron. (Vallet's Mass.)

℞. Sulphate of iron, eight troyounces.
Carbonate of sodium, nine troyounces.
Clarified honey, three troyounces.
Sugar, two troyounces.
Syrup, sufficient.
Boiling water, two pints.

Dissolve the sulphate and carbonate, each in a pint of water, adding to each solution one fl. ounce of syrup; mix the two solutions in a bottle just large enough to hold the mixture, close accurately with a stopper, and set by to let the carbonate of iron subside; decant, wash precipitate with water sweetened with syrup, in the proportion of a fl. ounce to the pint, until the washings cease to be saline; express, in flannel, as much of the water as possible, and mix with the honey. Heat over a water-bath, to proper consistence. This is known as Vallet's carbonate of iron. Dose, from ten to thirty grains, in the course of the day, where iron is indicated. *U. S. Ph.*

℞. Saccharated carbonate of iron, one ounce.
Confection of roses, a quarter ounce.

Beat together. *Brit. Ph.*

Subcarbonate of Iron.

℞. Sulphate of iron, eight troyounces.
Carbonate of sodium, nine troyounces.
Boiling water, eight pints.

Dissolve the sulphate and carbonate, each in four pints of the water, mix the solutions, stir, set by for powder to subside, decant, wash the precipitate with hot water, wrap in bibulous paper, and dry with gentle heat. *U. S. Ph.*

Dose, five to thirty grains, or even more, several times a day.

Powder of Subcarbonate of Iron.

℞. Subcarbonate of iron, one drachm.

Divide into six powders. One every six hours, in syrup. In chorea, neuralgia, etc. *Ellis.*

Mixture of Subcarbonate of Iron.

℞. Powdered myrrh, one drachm.
Sulphate of iron, one scruple.
Carbonate of potassium, one drachm.
Sugar, two drachms.
Water, six fl. ounces.

Mix. Dose, a teaspoonful, according to circumstances. *Ellis.*

Compound Iron Mixture.

℞. Myrrh,
Sugar, each, one drachm.
Carbonate of potassium, twenty-five grains.
Rose-water, seven fl. ounces and a half.
Powdered sulphate of iron, one scruple.
Spirit of lavender, half a fl. ounce.

Rub the myrrh, sugar, and carbonate with the rose-water, gradually added, then with the spirit of lavender, and lastly, with the iron; pour immediately into a well-stopped bottle, and keep closed. *U. S. Ph.*

These are well known under the name of *Griffith's anti-hectic mixture.* A modified formula by Bond directs to flavor with oils of partridgeberry and of nutmeg instead of rose-water and lavender. *Brit. Ph.* directs rose-water and spirit of nutmeg as flavors. Dose, one or two fl. ounces, two or three times a day, in chlorosis, debility of the gastric organs, etc.

Artificial Chalybeate Water.

℞. Water, fifty pints.
Carbonate of calcium, five drachms.
" magnesium, ten drachms.
Black oxide of iron, two drachms.
Sulphate of magnesium, six drachms.
Common salt, one drachm.

Mix, and condense a thousand cubic inches of carbonic acid in the solution. *Swediaur.*

Lozenges of Subcarbonate of Iron.

℞. Subcarbonate of iron, five troyounces.
Vanilla, thirty grains.
Powdered sugar, fifteen troyounces.
Mucilage of tragacanth, sufficient.

Rub the vanilla with a part of the sugar into a uniform powder, mix with the other powders, and with the mucilage form a mass to be divided into four hundred and eighty troches. *U. S. Ph.*

Compound Pills of Subcarbonate of Iron.

℞. Powdered foxglove, half a drachm.
" yew leaves,
Carbonate of iron, each, one drachm.
Ergot, two drachms.
Syrup, sufficient.

Mix, and make two hundred and fifty pills. Two to eight a day, with an infusion of savine, in chlorosis and amenorrhœa. *Neumann.*

℞. Powdered myrrh, thirty-six grains.
Carbonate of sodium,
Sulphate of iron, each, eighteen grains.
Syrup, sufficient.

Rub the myrrh with the carbonate of sodium, then with the sulphate of iron, and beat with syrup into a mass, and divide into twenty-four pills. *U. S. Ph.*

Officinal in some pharmacopœias as *Griffith's pills.* Dose, two to six pills, three times a day.

℞. Sulphate of iron,
Carbonate of potassium, each, two drachms.
Powdered tragacanth, thirty grains.
Syrup, five drops.

Rub the salts together, add the tragacanth and syrup, and form sixty pills. These are known as *Blaud's pills.* Dose, one or two, gradually increased.

℞. Sulphate of iron,
Myrrh, each, two scruples.
Carbonate of potassium,
Soap, each, half a drachm.

Beat together, and form forty pills. Dose, two, three times a day, as an emmenagogue. *Ellis.*

℞. Subcarbonate of iron,
Extract of conium,
each, one drachm.

Mix, and divide into twenty-four pills. Two to be taken twice a day. Given in fluor albus and scrofula. *A. T. Thomson.*

Iron Wine.

℞. Carbonate of iron,
one ounce and a half.
Contused orange-peel,
" gentian,
each, half an ounce.
Port wine, two pints.

Mix, and digest at a moderate heat for three days, repeatedly agitating.
Chapman.

Iron Plaster.

℞. Subcarbonate of
iron, three troyounces.
Lead plaster,
twenty-four troyounces.
Burgundy pitch, six troyounces.

Add the subcarbonate to the other ingredients previously melted together, and stir till cold. *U. S. Ph.*

As a strengthening plaster, in pains, and want of power in the muscles.

FERRI CARBURETUM.

Carburet of Iron.

This article, well known as Plumbago, or Black Lead, had been highly recommended in cutaneous affections, and was recognized as officinal by many of the pharmacopœias of continental Europe, but has fallen into disuse.

Prepared Carburet of Iron.

℞. Pulverized carburet
of iron, one pound.

Boil in water for an hour, decant, and digest in eight ounces of water, mixed with two ounces of nitric and muriatic acids; digest for twenty-four hours, decant, and wash well with water, and dry. Dose, from five to fifteen grains, two or three times a day. *Pruss. Ph.* 1829.

Pills of Carburet of Iron.

℞. Powdered carburet of iron,
Extract of bittersweet,
each, one drachm.
Calomel, twelve grains.
Golden sulphuret of
antimony, six grains.
Extract of liquorice, sufficient.

Mix, and form sixty pills. Dose, five, three times a day. *Niemann.*

Mixture of Carburet of Iron.

℞. Powdered carburet of iron,
Sulphur, each, one drachm.

Triturate together, and add

Barley water, one pint.

To be taken in four doses. In psora, etc.
Brera.

Ointment of Carburet of Iron.

℞. Powdered carburet of
iron, half an ounce.
Flowers of zinc, one drachm.
Lard, one ounce.

Triturate together. As an application in herpetic affections. *Brera.*

FERRI CHLORIDUM.

Chloride of Iron.

℞. Iron wire, two troyounces.
Muriatic acid, eight troyounces.

Digest in a flask until effervescence has ceased, filter, add four troyounces of muriatic acid, heat to near the boiling point, and add a troyounce or sufficient nitric acid until red fumes are no longer evolved and a drop of the liquid ceases to yield a blue precipitate with ferridcyanide of potassium. Evaporate by a gentle heat until reduced to eight and three-quarter troyounces; set aside until a solid crystalline mass is formed, and keep this in a glass-stopped bottle.
U. S. Ph.

Chloride of Iron and Acetate of Lead.

℞. Liquid chloride of iron,
four ounces.

Evaporate to one-half, and add

Acetate of lead, four ounces.

Dry, and pulverize. Four to twelve grains in hemorrhages. *Cadet de Gassicourt.*

Solution of Chloride of Iron.

℞. Iron wire, three troyounces.
Muriatic acid, eleven troyounces.

Saturate the acid with the iron in a glass flask, heat to boiling, filter the liquid, rinse the flask with a little boiling distilled water and pour it upon the filter. To the filtrate, put into a four-pint capsule, add six and a

half troyounces of muriatic acid, heat nearly to the boiling point, add a troyounce and a half of nitric acid or sufficient until it ceases to evolve red fumes. When cool add to the liquid enough water to make it measure a pint. *U. S. Ph.*

Its specific gravity is 1.355. Employed as a hemostatic, but chiefly for making the tincture. The corresponding preparation of *Ph. Germ.* has a specific gravity of 1.48, and contains 43.5 per cent. of anhydrous sesquichloride of iron. *Paris Codex* oxidizes the solution of protochloride of iron with gaseous chlorine; the finished preparation has the specific gravity 1.26. *Brit. Ph.* operates with nitric acid; its *stronger solution of perchloride of iron* has the specific gravity 1.338; by diluting this with three measures of distilled water, the *solution of perchloride of iron* is obtained. The preparations of the last three pharmacopœias contain no excess of muriatic acid.

Tincture of Chloride of Iron.

℞ Solution of chloride of iron, half a pint.
Alcohol, a pint and a half.

Mix. Dose, ten to thirty drops, gradually increased, two or three times a day.
U. S. Ph.

The *tincture of perchloride of iron, Brit. Ph.*, is made in the same proportions as the preceding, from the stronger solution of the perchloride.

Syrup of Chloride of Iron.

℞ Liquid chloride of iron, one part.
Syrup, sixty-seven parts.

Mix. Dose, one to four drachms.
Paris Codex.

Chloride of Iron Mixture.

℞ Saffron, half a drachm.
Water, four fl. ounces.

Infuse for an hour, strain, and add

Chloride of iron, half a drachm.
Syrup of valerian, two ounces.

Mix. Dose, a tablespoonful several times a day, in hemorrhage or chlorosis.
Cadet de Gassicourt.

℞ Mallow root, two drachms.
Water, sufficient

to obtain two ounces of decoction; strain, and add

Gum Arabic, two drachms.
Chloride of iron, half a scruple.
Syrup of mallow, six drachms.

Mix. Two teaspoonfuls, every hour or two, in softening of the stomach. *Radius.*

℞ Tincture of chloride of iron,
Compound tincture of aloes, each, half a fl. ounce.
Tincture of castor, two fl. drachms.

Mix. Ten to thirty drops, three times a day, in infusion of chamomile, as an emmenagogue. *Ellis.*

Ethereal, or Bestucheff's Tincture of Chloride of Iron.

℞ Solution of sesquichloride of iron, one part.
Spirit of ether, fourteen parts.

Mix, expose to the sunlight until the liquid becomes colorless, and afterwards in a shady place to the air until it has again assumed a yellowish color. *Ph. Germ.*

Much used in Europe. Dose, ten to thirty drops.

Protochloride of Iron.

℞ Muriatic acid, five hundred and twenty parts.
Iron filings, one hundred and ten parts.

Digest until the acid is saturated, filter, and evaporate rapidly until a pellicle forms; add one part of muriatic acid, agitate well, so that a crystalline powder is obtained on cooling. *Ph. Germ.*

Liquid Protochloride of Iron.

℞ Muriatic acid, five hundred and twenty parts.

It is saturated with iron as before, to the filtrate is added one part of muriatic acid and sufficient distilled water to make the whole weight one thousand parts.
Ph. Germ.

Contains ten per cent. of iron; used for ferruginous baths; must be kept in small well-stopped bottles.

Tincture of Protochloride of Iron.

℞ Protochloride of iron, recently prepared, twenty-five parts.
Alcohol, sp. gr. .892, two hundred and twenty-five parts.
Muriatic acid, one part.

Dissolve, mix, and keep in small well-stopped bottles. Dose, ten to thirty drops.
Ph. Germ.

FERRI CITRAS.

Citrate of Iron.

℞. Solution of citrate of iron, at will.

Evaporate at 140° to the consistence of a syrup, spread on plates of glass and dry. *U. S. Ph.*

Garnet-red scales, less freely soluble than the citrate of iron and ammonium. Dose, five to eight grains.

Solution of Citrate of Iron.

℞. Citric acid, in coarse powder, five troyounces and six drachms.
Solution of tersulphate of iron, a pint.
Water of ammonia, twenty fl. ounces.
Distilled water, sufficient.

Dilute the iron solution and ammonia water each with two pints of water, mix, collect the precipitate on a strainer and wash with water; drain, put one-half into a porcelain capsule, on a water-bath of 140°, add the citric acid, and stir until nearly dissolved. Then add enough of the remaining precipitate to saturate the acid, filter, and evaporate below 140° to one pint. *U. S. Ph.*

Dose, ten to twenty minims.

Wine of Citrate of Iron.

℞. Liquid citrate of iron, eight scruples.
Rhenish wine, sixteen ounces.

Digest for two or three days, and filter. *Béral.*

Aromatic Wine of Citrate of Iron.

℞. Iron filings, one ounce.
Lemon juice, three fl. ounces.
Contused gentian, half an ounce.
" cinnamon, two drachms.
Rhenish wine, sixteen ounces.

Digest for twenty-four hours, and decant. The dose is a drachm to half a fl. ounce, two or three times a day. *Hamburg Codex.*

℞. Iron filings, four ounces.
Bitter oranges, four.

Beat them together, and at the end of two days, add to the mixture

Madeira wine, ten fl. ounces.
Spirit of orange-peel, two fl. ounces.

Digest, and then express and filter. Dose, half a drachm to two drachms. *Batav. Ph.*

Said to be one of the best compounds of iron.

Tincture of Citrate of Iron.

℞. Liquid citrate of iron, two ounces.
Diluted alcohol, thirteen fl. ounces.
Spirit of citron, one fl. ounce.

Mix. Dose, ten to fifty drops. *Béral.*

Syrup of Citrate of Iron.

℞. Citrate of iron, one ounce.
Syrup, five fl. ounces.

Dissolve. Dose, thirty drops to a teaspoonful. *E. Parrish.*

℞. Ammonio-citrate of iron,
Cinnamon water, each, one part.
Simple syrup, thirty-eight parts.

Dissolve the citrate in the water and add to the syrup. *Paris Codex.*

Dose, one to four fl. drachms.

FERRI ET AMMONII CITRAS.

Ammonio-Citrate of Iron.

℞. Solution of citrate of iron, a pint.
Water of ammonia, six fl. ounces.

Mix, evaporate at 140° to consistence of syrup, and spread on glass to dry. *U. S. Ph.*

It resembles the citrate of iron in appearance and properties, but is more soluble. Dose, five to ten grains.

Wine of Citrate of Iron.

℞. Citrate of iron and ammonium, one hundred and sixty grains.
Orange wine, one pint (imper.).

Dissolve and filter. Dose, one to four fl. drachms. *Brit. Ph.*

Sweet Wine of Iron.

℞. Bitter orange-peel, four drachms.
Calisaya bark, one troyounce.
Ammonio-citrate of iron, two troyounces.
Citric acid, four drachms.
Sherry wine, four pints.
Deodorized alcohol, Syrup of orange-peel, Saturated tincture of sweet orange-peel, each, one pint.
Water, two pints.

Macerate for a week and filter. Dose, a teaspoonful. *Maryland Coll. Ph.*

Wine of Beef and Iron.

℞. Ammonio-citrate of iron, two hundred and fifty-six grains.
Liebig's extract of beef, three hundred and eighty-four grains.

Tincture of fresh orange-peel, one fl. ounce.
Syrup, three fl. ounces.
Sherry wine, twelve fl. ounces.

Dissolve and mix. *Maryland Coll. Ph.*

Nutritive wine is the above, omitting the iron. *Newark Ph. Assoc.*

FERRI ET AMMONII SULPHAS.

SULPHATE OF IRON AND AMMONIUM. AMMONIO-FERRIC ALUM.

℞. Solution of tersulphate of iron, two pints.
Sulphate of ammonium, four troyounces and a half.

Heat the iron solution to boiling, dissolve in it the sulphate, and crystallize. Wash the crystals rapidly with very cold water, and dry. *U. S. Ph.*

℞. Solution of sesquisulphate of iron, three hundred parts.
Sulphate of ammonium, twenty-eight parts.
Distilled water, one hundred parts.

Mix, dissolve by aid of heat, and evaporate to crystallize. *Ph. Germ.*

Dose, three to six grains, in leucorrhœa.

FERRI ET AMMONII TARTRAS.

TARTRATE OF IRON AND AMMONIUM.

℞. Tartaric acid, twelve troyounces.
Solution of tersulphate of iron, two pints and a half.
Carbonate of ammonium,
Distilled water, each, sufficient.

Dissolve six troyounces of the tartaric acid in two pints of water and neutralize with the ammonium carbonate; then add the remainder of the acid previously dissolved in half a pint of water. Prepare from the iron solution the hydrated oxide, and add it gradually to the solution of bitartrate of ammonium until this is saturated. Filter, evaporate below 140° to a syrupy consistence, and spread upon glass to dry. *U. S. Ph.*

Garnet-red scales, slowly soluble in cold water. Dose, five to ten grains.

Solution of Ammonio-Tartrate of Iron.

℞. Ammonio-tartrate of iron, half a drachm.
Distilled water, seven fl. drachms.
Rectified spirit, one fl. drachm.

Aikin.

FERRI ET MAGNESII CITRAS.

CITRATE OF IRON AND MAGNESIUM.

℞. Hydrated oxide of iron, two parts.
Citric acid (in solution), three parts.

Mix, dissolve, saturate the liquor with carbonate of magnesium, and evaporate to dryness.

This salt is soluble. The dose is from two to five grains. *Van der Corput.*

Syrup of Citrate of Iron and Magnesium.

℞. Citrate of iron and magnesium, eight parts.
Orange-flower water, fifteen parts.
Simple syrup, one hundred and eighty parts.

Mix. *Van der Corput.*

FERRI ET POTASSII TARTRAS.

TARTRATE OF IRON AND POTASSIUM.

℞. Solution of tersulphate of iron, a pint.
Bitartrate of potassium, seven troyounces.
Distilled water, four pints.

From the iron solution, prepare the hydrated oxide, and add it gradually to the cream of tartar and water, previously heated to 140°, until it ceases to be dissolved. Then filter and evaporate below 140° to the consistence of syrup, and spread on glass to dry. *U. S. Ph.*

Brit. Ph. directs as above, and orders the glass plates to be kept at 120°.

Dose, from ten grains to half a drachm, in solution, or with an aromatic or bitter, in bolus.

Powder of Tartrate of Iron and Colombo.

℞. Tartrate of iron and potassium, two scruples.
Powdered colombo, half a drachm.

Mix, and divide into four powders. One, every three or four hours, in syrup. As a tonic. *Ellis.*

Effervescent Powder of Tartrate of Iron.

℞ Carbonate of magnesium, two drachms.
Carbonate of potassium, half an ounce.
Tartrate of iron, two scruples.

Teaspoonful in water in divided doses, during the day; to be taken whilst effervescing. *Radius.*

Solution of Tartrate of Iron and Potassium.

℞ Tartrate of iron and potassium, one ounce.
Cinnamon water, one pint.

Dissolve; as a lotion or fomentation for bruises. Internally, in leucorrhœa, chlorosis, etc. *Swediaur.*

Compound Wine of Tartrate of Iron.

℞ Subcarbonate of iron, one ounce and a half.
Powdered gentian,
" orange-peel,
each, half an ounce.
Red wine, two pints.

Macerate for three days, and give a wineglassful two or three times a day. In dyspepsia, etc. *Ellis.*

℞ Subcarbonate of iron, two ounces.
Powdered cinnamon, one ounce.
Rhenish wine, two pints.

Macerate for some days, and filter. *Van Mons.*

Wine of Tartrate of Iron.

℞ Subcarbonate of iron, one part.
Rhenish wine, twenty-four parts.

Macerate for some days, and filter. Dose, one or two ounces. *Soubeiran.*

Syrup of Tartrate of Iron.

℞ Tartrate of iron and potassium,
Cinnamon water, each, one part.
Simple syrup, thirty-eight parts.

Dissolve the tartrate in the water, and mix with the syrup. Dose, one to two fl. drachms. *Paris Codex.*

Compound Tincture of Tartrate of Iron.

℞ Tartrate of iron wine, } each,
Tincture of calamus, } four
Hoffmann's balsamic elixir, } fluidrachms.

Mix. Dose, seventy drops, morning and evening, in wine. Said to be an excellent remedy in ascarides. *Dorfmueller.*

FERRI ET QUINIÆ CITRAS.

Citrate of Iron and Quinia.

℞ Solution of citrate of iron, ten fl. ounces.
Sulphate of quinia, a troyounce.

Dissolve the quinia in six fl. ounces of distilled water, with the aid of diluted sulphuric acid, and cautiously add ammonia water with constant stirring until in slight excess. Wash the precipitate on a filter and dissolve it in the iron solution, maintaining it at 120°. Then evaporate at 140° to the consistence of syrup, spread on glass, and dry. *U. S. Ph.*

Reddish-brown or yellowish-brown scales, which are slowly soluble in water.

Brit. Ph. directs to prepare hydrated oxide of iron from four and a half fl. ounces of solution of persulphate of iron (made from three ounces of sulphate of iron), and the quinia from one ounce of sulphate of quinia. Three ounces of citric acid are dissolved in five ounces of water, and in this solution the hydrated oxide of iron is dissolved, afterwards the quinia. After the solution has cooled, twelve fluidrachms of ammonia water are added in small quantities, with the precaution to dissolve the quinia, which separates, by stirring, before the next addition of ammonia is made. The solution is then filtered, evaporated, and dried as above.

Greenish golden-yellow scales, somewhat deliquescent and entirely soluble in cold water. Fifty grains yield with ammonia a white precipitate weighing, after drying, eight grains.

Dose, five to ten grains. The preparation of *Brit. Ph.* may be given in solution; that of *U. S. Ph.* is best exhibited in the form of powder and pills.

Wine of Citrate of Iron and Quinia. (Bitter Wine of Iron.)

℞ Citrate of iron and quinia, two hundred and fifty-six grs.
Sugar, four troyounces.
Distilled water, one fl. ounce.
Sherry wine, eleven fl. ounces.
Tincture of fresh orange-peel, two fl. ounces.

Dissolve, mix, and filter. Dose, one to four fluidrachms. *Maryland Coll. Ph.*

FERRI ET STRYCHNIÆ CITRAS.

CITRATE OF IRON AND STRYCHNIA.

℞. Citrate of iron and ammonium, five hundred grains.
Strychnia,
Citric acid, each, five grains.
Distilled water, nine fl. drachms.

Dissolve the iron salt in a fluidounce, and the strychnia and citric acid in a fluidrachm of water. Mix the solutions, evaporate at 140° to the consistence of syrup, and spread on glass to dry. *U. S. Ph.*

Garnet-red scales, soluble in cold water. Dose, two to six grains

FERRI FERROCYANIDUM.

PURE PRUSSIAN BLUE.

℞. Ferrocyanide of potassium, nine troyounces.
Solution of tersulphate of iron, a pint.
Water, three pints.

Dissolve the ferrocyanide in two pints of the water, and add the solution by degrees to the solution of tersulphate, previously diluted with a pint of water, stirring each time. Filter, wash the precipitate with boiling water, until the washings are tasteless. Dry, and powder. *U. S. Ph.*

Tonic, febrifuge, and alterative. Dose, three to five grains, several times a day, gradually increased till some effect is produced.

Powder of Prussian Blue.

℞. Prussian blue, twelve grains.
Sugar, one drachm.

Mix, and divide into twelve powders. One, every two hours. In epilepsy. *Radius.*

Compound Powder of Prussian Blue.

℞. Prussian blue, twelve grains.
White pepper,
Mustard, each, half an ounce.

Mix, and divide into twelve powders. One, every quarter of an hour, in the apyrexia of intermittents. *Foy.*

℞. Prussian blue,
Powdered guaiacum,
each, half to one drachm.

Mix, and divide into twelve powders. One three times a day, in intermittents. *Ellis.*

Pills of Prussian Blue.

℞. Prussian blue, eighteen to thirty-six grains.
Ammoniac, } each,
Extract of dandelion, } one
Rhubarb, } drachm.

Mix, and make fifty-four pills. Four to six, twice a day. In diseases of the ganglionic system. *Radius.*

Mixture of Prussian Blue.

℞. Prussian blue, one ounce.
Parsley water, six ounces.
Cherry-laurel water, two drachms.

Mix. A teaspoonful three times a day. In stone and gravel. *Radius.*

Ointment of Prussian Blue.

℞. Cod-liver oil, one ounce.
Prussian blue, twenty-four grains.
Cyanide of mercury, eight grains.
Oil of cherry-laurel, four drops.

Mix. As an application in strumous ophthalmia. *Canon de Villards.*

Blue Ink.

℞. Pure Prussian blue, six parts.
Oxalic acid, one part.

Triturate with a little water, to a perfectly smooth paste; then dilute with water to a proper consistence. A little gum may be added to prevent the fluid from spreading. *Mohr.*

FERRI GALLAS.

GALLATE OF IRON.

This is not used in medicine, but, with the tannate of iron, it forms the basis of writing ink.

Writing Ink.

℞. Aleppo galls, bruised, twelve pounds.
Water, six gallons.

Boil in a copper vessel for an hour, adding water, to supply loss by evaporation, and strain; boil residue with four gallons of water, for half an hour, and again boil with two gallons of water; mix decoctions, and add

Sulphate of iron, four pounds.
Contused gum
Arabic, three pounds and a half.

Agitate, permit to settle, strain through fine hair sieve, and keep in close vessels.
Lewis.

℞. Powdered galls, eight pounds.
Rasped logwood, four pounds.
Gum Arabic, three pounds.
Sulphate of iron, four pounds.
" copper,
Sugar candy, each, one pound.
Ammoniac, two ounces.
Water, sixteen pints.
Alcohol, half a pint.

Macerate for forty-eight hours, with a gentle heat, let rest for ten days, and decant into bottles. Not suitable for steel pens.
Hunt.

℞. Powdered galls, fifty parts.
Water, eight hundred parts.

Digest for twenty-four hours, strain, and add

Sulphate of iron,
Gum Arabic, each, twenty-five parts.

When clear, add a solution of

Chloride of ammonium,
eight parts.
Gum Arabic, two parts.
Boiling water, sixteen parts.
Oil of lavender, one part.

Said to be indelible. *Guibourt.*

℞. Bruised galls, forty ounces.
Gum Arabic, ten ounces.
Sulphate of iron, nine ounces.
Soft water, forty-five fl. ounces.

Macerate for three weeks, often stirring. A very permanent ink. *English Exchequer.*

FERRI IODIDUM.

Iodide of Iron.

℞. Iodine, three ounces.
Iron filings, one ounce and a half.
Distilled water, fifteen fl. ounces.

Mix the iodine, iron, and twelve ounces of the water in a flask; heat gently for ten minutes, then boil until froth becomes white; filter rapidly through wetted calico into a polished iron dish, wash filter with remainder of the water, boil down until it will solidify on cooling, pour on a porcelain slab, and when solid break into fragments and keep in a well-stoppered bottle. *Brit. Ph.*

Tonic, alterative, diuretic, and emmenagogue. Dose, three grains, gradually increased to eight, or more.

The solution is partly decomposed on evaporation, and the dry salt on keeping. The following formula for preparing extemporaneously a solution of this salt of definite strength, is given by *Ph. Germ.*

℞. Powdered iron, three parts.
Distilled water, eighteen parts.
Iodine, eight parts.

Digest in a flask until the solution becomes light green, filter, and wash the filter with water. Eight parts of iodine correspond to ten parts iodide of iron.

When prescribed in mixtures, a solution of the salt is prepared by this formula; for pills, the freshly prepared solution is evaporated as far as necessary.

Saccharated Iodide of Iron.

℞. Powdered iron, three parts.
Distilled water, ten parts.
Iodine, eight parts.

Mix, digest until the color is light green, and filter into a capsule containing

Powdered milk sugar,
forty parts.

Evaporate with constant stirring rapidly to dryness, and powder.

Greenish-white powder, containing 20 per cent. of iodide of iron. *Ph. Germ.*

This keeps better than without the addition of milk sugar. Dose, ten to thirty grains.

Lozenges of Iodide of Iron.

℞. Iodide of iron, thirty grains.
Saffron, half a drachm.
Mucilage of tragacanth,
Water of cinnamon,
each, sufficient.

Mix, and make two hundred and forty lozenges. Fifteen to twenty a day, gradually augmenting, in amenorrhœa and leucorrhœa. *Pierquin.*

Pill of Iodide of Iron.

℞. Fine iron wire, forty grains.
Iodine, eighty grains.
Sugar, in powder, seventy grains.
Liquorice root,
in powder, one hundred and forty grains.
Distilled water, fifty minims.

Agitate the iron, iodine, and water in a strong vial until froth is white; pour the

liquid upon the sugar in a mortar, triturate briskly, and incorporate the liquorice root. *Brit. Ph.*

Dose, three to eight grains.

Pills of Iodide of Iron.

℞ Iodine, three hundred grains.
Fine iron wire, one hundred and twenty grains.
Sugar, in powder, No. 60,
Liquorice root, in powder, No. 60, each, one hundred and ninety-two grains.
Liquorice, in powder, No. 60,
Gum Arabic, in powder, No. 60, each, forty-eight grains.
Reduced iron, ninety-six grains.
Water, a fluidounce and a half.

Mix the iodine, iron, and ten fl. drachms of water in a flask, and agitate until solution is light pea-green, filter into a capsule containing the reduced iron, and wash the filter with the remaining water. Evaporate solution until pellicle forms, add the remaining powders previously mixed, evaporate again to a pilular consistence, and divide into three hundred and eighty-four pills. Dissolve sixty grains of tolu in a fluidrachm of ether, shake the pills with the solution until they are uniformly coated, dry them, and keep them in a well-stopped bottle. *U. S. Ph.*

Dose, one to three or more.

Blancard's pills of Paris Codex are prepared in a similar manner, but contain one-fifth less of iodide of iron.

℞ Iodide of iron, one drachm.
Bromide of sodium, half a drachm.
Extract of liquorice, sufficient.

Mix, and form pills of two grains. One to three, morning and evening, in scrofula, etc. *Wernick.*

Solution of Iodide of Iron.

℞ Iodide of iron, one drachm.
Distilled water, one fl. ounce.

Mix. Six to ten drops three times a day, in some cold water. *Ellis.*

℞ Iodide of iron, twenty-four grains.
Distilled water, one fl. ounce.

Dissolve. A teaspoonful is a dose; this contains three grains. *Ellis.*

Syrup of Iodide of Iron.

℞ Iodine, two troyounces.
Iron wire, cut, three hundred grains.
Distilled water, three fl. ounces.
Syrup, sufficient.

Mix iodine, iron, and water in a flask, and shake occasionally until solution is green. Introduce a pint of syrup into a graduated bottle, heat it by a water-bath to 212°, and through a small funnel filter the solution into the syrup. Then shake thoroughly; when cool add sufficient syrup to make the whole measure twenty fluidounces, mix well, and keep the syrup in small vials, well stopped. *U. S. Ph.*

Dose, ten to twenty minims.

℞ Fine iron wire, one ounce.
Iodine, two ounces.
Refined sugar, twenty-eight ounces.
Distilled water, thirteen fl. ounces.

Prepare a syrup by dissolving the sugar in ten ounces of the water with the aid of heat. Digest the iodine and iron in a flask with the remaining water, till the froth becomes white; filter the liquid while hot into the syrup, and mix. The product should weigh forty-three ounces, and should have the specific gravity of 1.385. Dose, half to one fl. drachm. *Brit. Ph.*

This is about two-thirds the strength of the former. The syrup of *Ph. Germ.* contains four per cent. of its weight of iodine; that of *Paris Codex* only one-half per cent. of iodide of iron.

Wine of Iodide of Iron.

℞ Sulphate of iron, eight parts.
Iodide of potassium, ten and a half parts.
White wine, three hundred and twenty parts.

Pulverize the two salts, adding a few drops of wine, triturate for a few moments, add the rest of the wine, and filter. To be kept in glass-stopped bottles. Thirty-two parts contain one of the iodide. *Callond.*

℞ Iodide of iron, half an ounce.
Claret wine, one pint.

Dissolve. A dessertspoonful, morning and evening. *Soubeiran.*

Tincture of Iodide of Iron.

℞ Iodide of iron, one drachm.
Alcohol,
Distilled water, each, one fl. ounce.

Mix. Thirty drops to a fl. drachm, twice a day. *Foy.*

℞ Sulphate of iron, eight parts.
Iodide of potassium, ten and a half parts.

Alcohol (.842), one hundred and sixty parts.

Triturate the salts, separately, and then together; add alcohol, and filter. To be kept in glass-stopped bottles. Sixteen parts contain one of iodide of iron.

Callond.

Mixture of Iodide of Iron.

℞. Iodide of iron, sixteen grains.
Compound tincture of gentian, one fl. ounce.
Distilled water, seven fl. ounces.

Mix. Two tablespoonfuls, two or three times a day. *Ashwell.*

Injection of Iodide of Iron.

℞. Iodide of iron, half an ounce.
Distilled water, one pint.

Dissolve. As an injection, or lotion, in amenorrhœa, leucorrhœa, etc. *Soubeiran.*

℞. Iodide of iron, three grains.
Distilled water, six fl. ounces.

Dissolve. In gonorrhœa; strength to be increased if required. *Ricord.*

Syrup of Iodide and Chloride of Iron.

℞. Iodine, three hundred and eighty-four grains.
Muriatic acid (1.16), four ounces and a half.
Powdered sugar, twelve ounces.
Iron filings,
Distilled water, each, sufficient.

Mix the acid with an ounce and a half of clean iron-filings; allow to stand; agitate occasionally; when neutralized, filter. Mix the iodine with three ounces of water in a flask, add half the weight of iron filings, agitate till all the iodine is combined, and filter. Mix the solutions, add the sugar and as much water as will make a pint.

W. Procter.

Syrup of Iodide and Chloride of Iron Mixture.

℞. Syrup of iodide and chloride of iron, two drachms.
Syrup of orange-peel, four drachms.
Infusion of cascarilla, four fl. ounces.

Mix. One-fourth to be taken twice a day. *Battley.*

Bath of Iodide of Iron.

℞. Iodide of iron, two ounces.
Water, two hundred pints.

In leucorrhœa, amenorrhœa, chlorosis, etc. The quantity of iodide may be increased gradually to double, for adults. *Pierquin.*

Ointment of Iodide of Iron.

℞. Iodide of iron, one drachm and a half.
Lard, one ounce.

Triturate together. A piece as large as a hazelnut to be rubbed on the inside of the thigh, morning and evening, in leucorrhœa and amenorrhœa; also beneficial in glandular swellings. *Pierquin.*

FERRI LACTAS.

Lactate of Iron.

℞. Lactic acid, one fl. ounce.
Iron filings, half a troyounce.
Distilled water, sufficient.

Mix the acid with a pint of the water in an iron vessel, add the iron, and digest on a water-bath until action ceases, preserving the measure by the addition of water; filter while hot into a porcelain capsule, and crystallize; wash the crystals with a little alcohol, and dry. By evaporating the mother liquor in an iron vessel to one-half and filtering while hot, more crystals may be obtained. *U. S. Ph.*

℞. Lactate of calcium, one hundred parts.
Boiling water, five hundred parts.

Dissolve.

Pure sulphate of iron, sixty-eight parts.
Distilled water, five hundred parts.

Dissolve.

Mix the two solutions; filter, add an excess of lactic acid, heat in a water-bath, stirring constantly; filter, to separate the sulphate of calcium; evaporate rapidly either in an iron vessel or a porcelain one, with the addition of some iron filings; filter and crystallize; wash the crystals with alcohol, and dry. *Lepage.*

Used in same cases as other preparations of iron. Dose, one or two grains, frequently repeated.

Lozenges of Lactate of Iron.

℞. Lactate of iron, one drachm.
Sugar, one ounce and a half.
Mucilage of gum Arabic, sufficient.

Mix, and make lozenges of twelve grains. *Cap.*

Pills of Lactate of Iron.

℞. Lactate of iron,
Powdered mallow, equal parts.
Clarified honey, sufficient.

Make pills of two grains each. *Cap.*

Syrup of Lactate of Iron.

℞. Lactate of iron, one drachm.
White sugar, twelve ounces and a half.
Boiling distilled water, six fl. ounces and a half.

Triturate the lactate with half an ounce of the sugar, dissolve quickly in the boiling water, pour the solution into a matrass, place on a sand-bath, add the rest of the sugar gradually; when dissolved, filter; and when cold, pour into well-stopped bottles.

Dose, from two to four fl. drachms. *Cap.*

FERRI MALAS.

Malate of Iron.

Extract of Malate of Iron.

℞. Sour apples, fifty parts.
Powdered iron, one part.

Reduce the apples to a pulp, express the juice, let subside, decant, and digest with the iron until action ceases. When cold, add enough water to make the weight forty-eight parts, filter, and evaporate to the consistence of an extract. *Ph. Germ.*

It contains seven to eight per cent. of iron, and is much prescribed in Germany under the name of *Extractum ferri pomatum*. Dose, five to ten grains and more.

Solution of Malate of Iron.

℞. Malate of iron, one ounce.
Water, twelve fl. ounces.

Dissolve and filter. As an astringent, in doses of a fl. drachm. *Spielmann.*

Tincture of Malate of Iron.

℞. Extract of malate of iron, one part.
Vinous cinnamon water, nine parts.

Dissolve and filter. Dose, half to one teaspoonful. *Ph. Germ.*

Mixture of Malate of Iron.

℞. Extract of Peruvian bark,
" gentian, each, one drachm.
Peppermint water,
Chamomile water, each, one fl. ounce.
Malate of iron, half a drachm.

To be taken in divided doses, in dyspepsia, etc. *Augustin.*

Bitter Infusion of Iron.

℞. Iron filings, three ounces.
Bruised ginger,
" gentian, each, one ounce.
" orange-peel, half an ounce.

Infuse in a pint of strong old cider for a month, frequently agitating, and filter.

Dose, half a drachm to one drachm, thrice daily, as a tonic.

FERRI NITRAS.

Nitrate of Iron.

℞. Red oxide of iron, four drachms.
Nitric acid, six fl. drachms.

Dissolve, and add

Water, one fl. ounce.

Filter. Dose, six to twelve drops, in a convenient vehicle. In dyspepsia, and calculous complaints. *Swediaur.*

Syrup of Protonitrate of Iron.

℞. Iron wire (card teeth), two ounces.
Nitric acid, sp. gr. 1.42, three fl. ounces.
Water, thirteen fl. ounces.
Powdered sugar, two pounds.

Put the iron in a wide-mouthed bottle, kept cool by standing in cold water, and pour upon it three fl. ounces of water. Mix the acid with ten fl. ounces of water, and add it gradually to the iron, agitating frequently, until the acid is saturated. Filter the solution into a bottle containing the sugar, and marked to contain thirty fl. ounces, adding water enough to measure that quantity. Dissolve the sugar, strain, pour into suitable vials, and seal them.

W. Procter, Jr.

Solution of Nitrate (Pernitrate) of Iron.

℞. Iron wire, cut, two troyounces and a half.
Nitric acid, five troyounces.
Distilled water, sufficient.

Mix the iron with twelve fl. ounces of the water, in a wide-mouthed bottle, and add to it gradually and with agitation, three troy-

ounces of the acid, previously diluted with six fl. ounces of the water, preventing the occurrence of red fumes by placing the bottle in cold water. Then agitate well until the liquid, when filtered, is of a pale green color. Filter into a capacious porcelain capsule, heat to 130° and add the remainder of the acid. When effervescence has ceased, continue the heat until no more gas escapes, and add distilled water to make the liquid measure thirty-six fl. ounces. The specific gravity is between 1.060 and 1.070, and a fl. ounce yields eight to ten grains anhydrous oxide of iron. *U. S. Ph.*

℞ Fine iron wire, free from rust,	one ounce.
Nitric acid,	four fl. ounces and a half.
Distilled water,	sufficient.

Dilute the acid with sixteen ounces of the water, add the iron and leave in contact until dissolved, moderating the action, if too violent, by the addition of a little distilled water; filter and add distilled water to make the liquid measure thirty fl. ounces. Its specific gravity is 1.107, and a fl. drachm yields 2.6 grains anhydrous oxide of iron. *Brit. Ph.*

Dose, ten to forty minims. The result of both processes is greatly influenced by slight variations in the temperature.

FERRI OXALAS.

Oxalate of Iron.

℞ Sulphate of iron,	two troyounces.
Oxalic acid,	four hundred and thirty-six grains.
Distilled water,	sufficient.

Dissolve the sulphate in thirty fl. ounces, and the acid in fifteen fl. ounces of the water; filter, and mix the solutions; decant the clear liquid, wash the precipitate with water until the washings cease to redden litmus, and dry it with a gentle heat. *U. S. Ph.*

Tonic, with little or no astringency. Dose, one to three grains.

FERRI OXIDUM.

Peroxide (Sesquioxide) of Iron.

Moist Oxide (Peroxide) of Iron.

℞ Solution of tersulphate of iron,	one pint.
Water of ammonia,	twenty fl. ounces.
Water,	sufficient.

To the ammonia water, mixed with two pints of water, add, with constant stirring, the iron solution, previously mixed with two pints of water. Then pour the whole on a wet muslin strainer, and wash the precipitate with water until the washings pass nearly tasteless.

Brit. Ph. directs to preserve this moist precipitate in a stoppered bottle. *U. S. Ph.* orders the above quantity to be diluted with water to measure a pint and a half, and then to preserve it in the same manner.

If the above is to be made in haste as an antidote, the washing may be performed more quickly, though less perfectly, by pressing the strainer forcibly with the hands until no more liquid passes, and then mixing the precipitate with the required water. *U. S. Ph.*

℞ Solution of tersulphate of iron,	sixty parts.
Calcined magnesia,	seven parts.

Mix the solution with one hundred and twenty parts of water, triturate the magnesia with the same quantity of water, mix and shake well.

This is to be prepared only when needed for use, and constitutes the *antidote to arsenic* of *Ph. Germ.*

Dry Hydrated Oxide of Iron.

℞ Moist peroxide of iron, at will.

Dry at a temperature not exceeding 212°. *Brit. Ph.*

Ph. Germ. directs a gentle heat for drying.

Used like the subcarbonate of iron of *U. S. Ph.*

Soluble Saccharated Oxide of Iron.

℞ Solution of sesquichloride of iron,	
Simple syrup, each,	twenty parts.
Solution of soda,	forty parts.
Distilled water,	three hundred parts.
Powdered sugar,	sufficient.

Mix the iron solution and syrup, add gradually the soda solution with constant stirring, and set aside for twenty-four hours. To the clear liquid add the water boiling hot, stir well, and set aside to subside. Decant the supernatant liquid, add again distilled water, collect the precipitate upon a filter, wash it with water as long as the washings pass colorless and have a strong alkaline reaction, drain and mix in a porcelain capsule with ninety parts of sugar. Dry the mixture, with constant agitation, by means of a water-bath, and add suffi-

cient sugar to make the whole weigh one hundred parts. It contains three per cent. of iron, and is entirely soluble in five parts of water. *Ph. Germ.*

Dose, ten to twenty grains.

Syrup of Oxide of Iron.

The mixture of sugar and oxide, as obtained by the preceding formula, instead of being evaporated is digested in a water-bath for two hours, adding from time to time the water which may have evaporated. When cool sufficient simple syrup is added to make the whole weigh three hundred parts. One hundred parts represent one part of iron. *Ph. Germ.*

Red Oxide of Iron. Colcothar.

℞. Sulphate of iron, any quantity.

Heat till water of crystallization is expelled; then roast by a powerful heat till all acid is driven off; powder, wash till all traces of acid disappear; dry.

Paris Codex.

Astringent and tonic, and has been advised in neuralgia, etc., in doses of five to fifteen grains, but is inferior to the subcarbonate and hydrated oxide; it is now mainly employed in the arts for polishing metals, etc.

Oxide of Iron Plaster.

℞. Hydrated peroxide of iron, in fine powder, one ounce.
Burgundy pitch, two ounces.
Lead plaster, eight ounces.

Melt the pitch and plaster, and add the iron, stirring constantly. *Brit. Ph.*

As a strengthening plaster, in muscular relaxation and weakness, known in Great Britain under the name of *Chalybeate Plaster.*

℞. Lead plaster, } each,
Compound lead plaster, } ten
Yellow wax, } parts.
Olive oil, four parts.

Melt together; triturate

Colcothar, ten parts,

with four parts of olive oil, and mix the whole together, stirring constantly until cool. This is *Canet's Plaster* of the *Paris Codex.*

The *Iron Plaster* of the *U. S. Ph.* is made with subcarbonate of iron.

FERRI OXIDUM MAGNETICUM.

MAGNETIC OR BLACK OXIDE OF IRON.

℞. Solution of persulphate of iron, five fl. ounces and a half.
Sulphate of iron, two ounces.
Solution of soda, four pints.
Distilled water, sufficient.

Dissolve the sulphate in two pints of the water, add the solution of persulphate, and then mix with the solution of soda. Boil, set aside for two hours, stirring occasionally, transfer upon a calico filter, drain, wash thoroughly with distilled water, and dry the precipitate at or below 120°. *Brit. Ph.*

Dose, five to ten grains.

℞. Powdered iron filings, any quantity.

Moisten with sufficient water, expose to the air, and replace from time to time the evaporated water. After four or five days, powder the mass, throw it upon a hair sieve, and wash with water to separate the oxide. Set the washings aside, decant the sediment from the heavier metallic iron, collect upon a filter, and dry. *Paris Codex.*

These do not give identical products, but they are sufficiently alike to be used for the same purposes.

Powder of Black Oxide of Iron

℞. Black oxide of iron, three parts.
Aromatic powder, six parts.
Sugar, eight parts.

Mix. Dose, thirty to forty grains, twice a day, in leucorrhœa and rachitis.

Swediaur.

℞. Black oxide of iron,
Colombo, each, one drachm.
Rind of bitter orange, half an ounce.
Cinnamon, one scruple.

Mix, and divide into nine powders. Three to be given a day, in chlorosis and amenorrhœa. *Brera.*

Pills of Black Oxide of Iron.

℞. Black oxide of iron, eight grains.
Powdered saffron,
" valerian,
each, sixteen grains.
Syrup of wormwood, sufficient.

Mix, and form eight pills; four to eight a day, in amenorrhœa. *Foy.*

℞. Black oxide of iron,
Powdered canella,
each, one drachm.

Extract of ox bile,
" centaury,
each, three drachms.

Mix, and form pills of four grains. Four to six a day, in engorgements of the abdominal viscera. *Pierquin.*

Electuary of Black Oxide of Iron.

℞. Black oxide of iron, half an ounce.
Carbonate of potassium, two scruples.
Prepared chalk,
Ginger, each, two drachms.
Syrup of orange-peel, sufficient.

Mix well. Dose, half a drachm, two or three times a day, in chlorosis and leucorrhœa. *Swediaur.*

℞. Black oxide of iron,
Soap, each, one drachm.
Extract of hemlock, twelve grains.
" squill, one scruple.
Oxymel, sufficient.

Mix well. Dose, half a drachm to a drachm, in dropsy, with engorgement of the abdominal viscera. *Brera.*

FERRI PERSULPHAS.

Ferric Sulphate.

Solution of Tersulphate of Iron.

℞. Sulphate of iron, in coarse powder, twelve troyounces.
Sulphuric acid, two troyounces and sixty grains.
Nitric acid, one troyounce and six drachms.
Water, sufficient.

Mix the acids with half a pint of water, heat in a capacious porcelain capsule to boiling, and add the iron salt, one-fourth at a time, stirring after each addition until effervescence ceases; continue the heat until solution is reddish-brown and free from nitrous odor; when cool, add water to make the liquid measure twenty-four fl. ounces. Its specific gravity is 1.320, and a fl. ounce yields sixty-nine grains of oxide of iron. *U. S. Ph.*

Liquid ferric sulphate, *Ph. Germ.*, is nearly identical with the above; it has the specific gravity 1.317 to 1.319, and contains eighty per cent. of iron. *Solution of persulphate of iron, Brit. Ph.*, has the specific gravity 1.441, and one fl. drachm yields 11.44 grains of oxide; eight ounces of sulphate of iron yield eleven fl. ounces of this solution.

The above is mostly used as the source of ferric oxide in making other preparations of iron.

Solution of Subsulphate of Iron. (Monsel's Solution.)

℞. Sulphate of iron, in coarse powder, twelve troyounces.
Sulphuric acid, one troyounce and thirty grains.
Nitric acid, one troyounce and five drachms.
Distilled water, sufficient.

Proceed as in the process for the previous solution; when nitrous vapors are no longer perceptible, and the liquid is nearly cold, add distilled water to make it measure twelve fl. ounces. *U. S. Ph.*

A powerful styptic, used for arresting hemorrhages.

FERRI PHOSPHAS.

Phosphate of Iron.

℞. Sulphate of iron, five troyounces.
Phosphate of sodium, six troyounces.
Water, eight pints.

Dissolve the sulphate and phosphate, each, in four pints of the water; mix the solutions, and let settle; decant, wash the precipitate with hot water, and dry with a gentle heat. *U. S. Ph.*

The process of *Ph. Germ.* is essentially the same, except that the salts are dissolved in about half the above quantities of water.

Used with advantage in amenorrhœa, and certain cases of dyspepsia. Dose, five to ten grains.

℞. Sulphate of iron, three ounces.
Phosphate of sodium, two and a half ounces.
Acetate of sodium, one ounce.
Boiling distilled water, four pints.

Dissolve the iron salt in one half, and the sodium salts in the other half of the water, mix the solutions, transfer to a calico filter, wash the precipitate well with hot distilled water, and dry it at 120°. *Brit. Ph.*

Pills of Phosphate of Iron.

℞. Phosphate of iron, forty grains.
Potassa (or soda), three grains.
Extract of aloes, four grains
Powdered liquorice root, twenty grains.
Albumen of egg, sufficient.

Mix, and form twelve pills. Dose, one every two to four hours. *Carmichael.*

Ointment of Phosphate of Iron.

℞. Phosphate of iron, two drachms.
Lard, one ounce.

Mix. Recommended with the former, in cancer. *Carmichael.*

Syrup of Phosphate of Iron.

℞. Granular sulphate of iron, two hundred and twenty-four grains.
Phosphate of sodium, two hundred grains.
Acetate of sodium, seventy-four grains.
Diluted phosphoric acid, five fl. ounces and a half.
Refined sugar, eight ounces.
Distilled water, eight fl. ounces.

Dissolve the iron salt in one half, and the sodium salts in the other half of the water; mix, wash the precipitate well, press strongly between bibulous paper, and dissolve in the acid. Filter, add the sugar, and dissolve without heat; it should measure twelve fl. ounces, and contains one grain of phosphate of iron in each fl. drachm. *Brit. Ph.*

Compound Syrup of Phosphates.
(Chemical Food.)

℞. Sulphate of iron, ten drachms.
Phosphate of sodium,
" calcium,
each, twelve drachms.
Glacial phosphoric acid, twenty drachms.
Carbonate of sodium, forty grains.
Carbonate of potassium, one drachm.
Powdered cochineal, two drachms.
Sugar, thirty-two troyounces.
Orange-flower water, one fl. ounce.
Muriatic acid, Water of ammonia, Water, each, sufficient.

Dissolve the iron salt in two, and the sodium phosphate in four fl. ounces of boiling water, mix, and wash the precipitate. Dissolve the calcium salt in four fl. ounces of water with sufficient muriatic acid, precipitate by ammonia and wash well. Dissolve the two freshly precipitated phosphates in the phosphoric acid, previously dissolved in four fl. ounces of water, add the carbonates, and then sufficient muriatic acid to dissolve any precipitate that may occur; add water to make the solution measure twenty-two fl. ounces, dissolve in it the sugar by the aid of heat, adding towards the last the cochineal, strain, and when cool, add the orange-flower water. Dose, a teaspoonful, containing about two grains of phosphate of calcium and one grain of phosphate of iron. *E. Parrish.*

FERRI PYROPHOSPHAS.

PYROPHOSPHATE OF IRON.

℞. Phosphate of sodium, seven troyounces and a half.
Solution of tersulphate of iron, seven fl. ounces.
Citric acid, two troyounces.
Water of ammonia, five fl. ounces.
Water, sufficient.

Exsiccate the phosphate, then heat it to incipient redness; afterwards dissolve in three pints of water, cool the solution to 50°, and add sufficient of the iron solution to precipitate. Drain and wash the precipitate thoroughly upon a muslin strainer, and transfer it to a weighed porcelain capsule. Saturate and dissolve the citric acid with sufficient ammonia water, add the solution to the precipitate, stir until dissolved, and evaporate to sixteen troyounces. Spread upon glass, dry, and preserve in well-stopped bottles.

It contains forty-eight per cent. of anhydrous pyrophosphate of iron. *U. S. Ph.*

Pyrophosphate of Iron and Sodium.

℞. Pyrophosphate of sodium, two hundred parts.
Solution of sesquichloride of iron, eighty-one parts.
Distilled water, six hundred and twenty parts.
Alcohol, one thousand parts.

Dissolve the pyrophosphate in four hundred parts of hot water, and add to it gradually the iron solution previously diluted with the remainder of the water, as long as the precipitate is redissolved; filter, add the alcohol, collect the precipitate, wash it with some alcohol, press between bibulous paper, and dry with a gentle heat. *Ph. Germ.*

Syrup of Pyrophosphate of Iron.

℞. Pyrophosphate of iron, one part.
Distilled water, two parts.
Simple syrup, ninety-seven parts.

Dissolve the iron salt in the water, and add to the syrup. *Paris Codex.*

FERRI SULPHAS.

Sulphate of Iron.

R. Iron wire, in small pieces, twelve troyounces.
Sulphuric acid, eighteen troyounces.
Water, eight pints.

Mix the acid and water, and add the iron; heat till effervescence ceases. Pour off the solution, add half a drachm of sulphuric acid, filter, the end of the funnel touching the bottom of the receiving vessel. Evaporate in a matrass, set aside to crystallize in a covered vessel, drain crystals in a funnel, dry, and keep in well-closed bottles. *U. S. Ph.*

Astringent and tonic. Dose, from one to five grains.

Granulated Sulphate of Iron.

R. Iron wire, four ounces.
Sulphuric acid, four fl. ounces.
Distilled water, thirty fl. ounces.

Digest until effervescence nearly ceases, boil for ten minutes, filter into a jar containing eight fl. ounces of alcohol, and stir. When cool, drain the crystals and dry them on porous tiles. *Brit. Ph.*

Dried Sulphate of Iron.

R. Sulphate of iron, twelve troyounces.

Expose, in an unglazed earthen vessel, to a moderate heat until it has effloresced; raise and maintain the heat at 300° until the salt ceases to lose weight, then powder and preserve. *U. S. Ph.*

Ph. Germ. restricts the heat to 212°; *Brit. Ph.* allows the heat finally to be raised to 400°.

Three grains are equal to five of the undried.

Powder of Sulphate of Iron.

R. Powdered sulphate of iron, four grains.
Powdered ginger, ten to sixteen grains.

Mix. To be taken twice a day, in amenorrhœa, chlorosis, etc. *Saunders.*

R. Powdered sulphate of iron, half an ounce.
Powdered tansy, three ounces.

Mix. Dose, a drachm. As a vermifuge. *Dan. Ph.*

Pills of Sulphate of Iron.

R. Dried sulphate of iron, two parts.
Extract of dandelion, five parts.
Conserve of red roses, two parts.
Powdered liquorice root, three parts.

Beat together, and form into five grain pills. *Ed. Ph.*

R. Sulphate of iron, two drachms.
Extract of wormwood, half an ounce.
Syrup of saffron, sufficient.

Beat into mass, and divide into one hundred and fifty pills. Four to five, three times a day. In chlorosis, leucorrhœa, etc. *Werthof.*

R. Sulphate of iron, } each,
Kino, } one
Gentian, } drachm
Extract of gentian, } and a half.
Turpentine, three drachms.
Powdered mallow root, sufficient.

Beat into mass, and make two hundred and seventy pills. Ten, four times a day, in secondary gonorrhœa. *Walch.*

Blaud's Anti-Chlorotic Pills.

R. Sulphate of iron, in fine powder, one ounce.
Carbonate of potassium, in dry powder, one ounce.
Mucilage of tragacanth,
Powdered liquorice root, each, sufficient.

To make ninety-nine pills. Triturate well, and divide into pills. To be taken, one in the morning and evening, for the first three days, a third pill at noon for the next three days, and so increased to nine a day. *Blaud.*

Paris Codex directs thirty grains each of dried sulphate of iron and carbonate of potassium to be made into one hundred and twenty pills.

Pills of Iron and Rhubarb.

R. Dried sulphate of iron, four parts.
Extract of rhubarb, ten parts.
Conserve of red roses, five parts.

Beat into mass, and form five grain pills.

Tonic and laxative, in dose of two or three.

Compound Sulphate of Iron Pills.

R. Sulphate of iron, one scruple.
Powdered senna, half a scruple.

Powdered jalap,
" cream of tartar,
each, half a scruple.
" ginger, twelve grains.
Syrup, sufficient.

Form mass, and divide into twenty-five pills. *Ellis.*

These are known as *Hooper's Pills*, as are also the following:—

℞ Barbadoes aloes, eight ounces.
Sulphate of iron, four ounces.
Extract of black hellebore, Myrrh, Soap, each, two ounces.
Powdered canella,
" ginger, each, one ounce.
Water, sufficient.

Beat into mass, and divide into two and a half grain pills. *Phil. Coll. Ph.*

As a laxative and emmenagogue.

℞ Dried sulphate of iron, one scruple.
Powdered aloes, two scruples.
" cloves, five grains.
Venice turpentine, sufficient.

Form mass, and divide into twenty pills. One, three times a day, as an emmenagogue. *Ellis.*

Solution of Sulphate of Iron.

℞ Sulphate of iron,
Alum, each, six ounces.
Water, forty-eight ounces.

Dissolve, filter, and add

Sulphuric acid, four ounces.

In hemorrhages, in doses of ten or twelve drops, in water. *Spielmann.*

Sulphate of Iron Injection.

℞ Sulphate of iron, half to one drachm.
Sage water, four ounces.
Mucilage gum Arabic, half a drachm.

Mix. As an injection, in nasal and uterine hemorrhages. *Berends.*

Mixture of Sulphate of Iron.

℞ Sulphate of iron, one scruple.
Sulphuric acid, four to six drops.
White sugar, one drachm.
Water, four fl. ounces.

Mix. A teaspoonful, with water, every two to four hours, as a tonic. *Ellis.*

℞ Sulphate of iron, four grains.
Elixir of vitriol, twenty drops.
Distilled water, one fl. ounce.

Mix. A teaspoonful, in a wineglass of water, three times a day. *Ellis.*

℞ Powdered myrrh, one drachm.
" gum Arabic, two drachms.
Syrup, one fl. ounce.
Infusion of chamomile, six fl. ounces.

Mix well, and add

Powdered sulphate of iron, fifteen grains.
Cinnamon water, one fl. ounce.

Mix. Two spoonfuls every three hours, as an emmenagogue. *Frank.*

Syrup of Sulphate of Iron.

℞ Sulphate of iron, two drachms.
Water, one fl. ounce.

Dissolve, filter, and add

Syrup of gum Arabic, seventeen fl. ounces.

Mix. A tablespoonful twice a day, in chlorosis, leucorrhœa, etc. *Soubeiran.*

FERRI SULPHURETUM.

Sulphuret of Iron.

Heat an iron rod to a white heat, apply to it a roll of sulphur, receiving the sulphuret of iron in water; separate it from the sulphur, dry, and keep in a well-stopped bottle.

Used to make hydrosulphuric acid, by the addition of diluted sulphuric acid.

FERRI TANNAS.

Tannate of Iron.

℞ Tannic acid, ninety parts.
Boiling water, sufficient

to dissolve; add gradually

Subcarbonate of iron, four hundred and forty parts.

Agitate till effervescence ceases. Evaporate at 176°, in a porcelain vessel, until it becomes thick, then dry on a plate, in a stove, at 95°. *Benedetti.*

Found useful in chlorosis, in doses of two or three grains, thrice a day, increasing the dose as required.

FERRI VALERIANAS.

Valerianate of Iron.

℞. Clean iron filings, at will.

Put in a wedgewood mortar, add gradually an equal weight of valerianic acid, stirring continually. In an hour, add distilled water, pour the whole into a flask, warm gently, and filter. The surface, exposed to the air, becomes covered with a crystalline layer of valerianate of iron. Collect this on a filter, repeat this as long as crystals are formed.

Dose, one to two grains. *Ruspini.*

℞. Solution of tersulphate of iron, eight fl. ounces.
Valerianate of sodium, five troyounces.
Distilled water, sufficient.

Dissolve the valerianate in half a pint of the water, and add to the iron solution. Wash the precipitate upon a filter, and dry upon porous tiles. *U. S. Ph.*

It should be kept in a well-stopped bottle.

FICUS.

Figs.

Figs are the fruit of *Ficus carica*, a small tree, a native of Asia, and now cultivated in all warm climates. There are numerous varieties.

Sex. Syst. Polygam. diœc. *Nat. Syst.* Moraceæ.

Linn. Sp. Pl. 1513. Griffith, Med. Bot. 576.

They come to this country in a dry state, from the ports of the Levant. They are nutritious, laxative, and demulcent, and are used in medicine in demulcent decoctions, and sometimes externally, as a suppurative poultice.

Decoction of Figs.

℞. Figs, one ounce.
Water, one pint.

Boil, and strain. Demulcent and pectoral. *Cadet.*

Gargle of Figs.

℞. Figs,
Mallow root, each, one ounce.
Milk, two pints.

Boil away one-fourth. As an emollient gargle in sore throat. *Radius.*

Compound Decoction of Figs.

℞. Figs,
Raisins, each, two ounces.
Barley water, two pints.

Boil for a quarter of an hour, and add

Liquorice root, half an ounce.

Infuse, and strain. *Foy.*

This is identical with the compound decoction of barley of the *Lond. Ph.*, and like it, is nutritive, demulcent, and laxative.

Coffee of Figs.

℞. Figs, roasted like coffee, two drachms.
Water, one pint.

Boil gently, and strain. *Radius.*

This is said to be an excellent substitute for coffee, and to form an excellent diet in diseases of the chest.

Paste of Figs.

℞. Figs, at will.

Reduce to a pulp, express through a hair-sieve, mix with four times the weight of sugar, concentrate by a gentle heat, and cut into lozenges. *Soubeiran.*

FILIX MAS.

Male Fern.

The Male Fern is the rhizome of *Nephrodium* (*Aspidium*) *filix mas*, a native of the temperate regions of the whole world, in shady, rather damp situations.

Sex. Syst. Crypt. fil. *Nat. Syst.* Polypodiaceæ. Linn. Sp. Pl. 1551. (Polypodium.) Griffith, Med. Bot. 670.

The rhizome is covered with portions of the brown stipes, is green internally, and has a feeble, but peculiar odor, and a sweet, bitter, astringent taste. It should always be used as fresh as possible, only such part should be employed as has retained its green color; and the stipes being inert, should then be removed. It is tonic and anthelmintic, but is not much used in this country. The dose, in substance, is from one to three drachms, twice a day.

Powder of Male Fern.

℞. Male fern, one ounce.
Gamboge,
Calomel, each, fourteen grains.
Scammony, eighteen grains.

Mix, and divide into three powders. In tapeworm. *Cadet.*

Bolus of Male Fern.

℞. Male fern, half an ounce.
Rhubarb, two drachms.
Levant wormseed, half an ounce.
Calomel, one drachm.
Syrup of wormwood, sufficient.

Mix, and form twelve boluses. *Spielmann.*

Oleoresin of Male Fern.

℞. Male fern, in powder, No. 60, twelve troyounces.
Ether, sufficient.

Obtain by slow percolation twenty-four fl. ounces of tincture; distil off the greater part of the ether, and allow the remaining ether to evaporate spontaneously; keep the oleoresin in a well-stopped bottle.
U. S. Ph.

Dose, fifteen to thirty grains twice a day.

This preparation is called extract by *Ph. Germ.*, liquid extract by *Brit. Ph.*, and oil of male fern by *Paris Codex.*

Pills of Extract of Male Fern.

℞. Oleoresin of male fern, one scruple.
Powder of male fern, twelve grains.
Conserve of roses, sufficient.

Mix, and make twelve to sixteen pills. To be taken in the evening, at short intervals.
Peschier.

℞. Oleoresin of male fern, twenty-four drops.
Powdered mallow root, three scruples.
Fresh lard, two scruples.

Mix, and divide into twenty-four pills. One-half to be taken in the evening, and the remainder next morning, and, an hour afterwards, a dose of castor oil. *Jourdan.*

Electuary of Male Fern.

℞. Oleoresin of male fern, half a drachm.
Honey of roses, one ounce.

Mix. Half in the evening, the remainder the next morning. *Radius.*

Jelly with Male Fern.

℞. Male fern,
Corsica moss, each, six drachms.
Isinglass, one drachm.
Water, eight ounces.

Boil to three ounces, and strain; add

Oleoresin of male fern, one scruple.
Syrup of mulberries, one ounce.

To be taken in divided doses, during the day. *Phœbus.*

Mixture of Male Fern.

℞. Male fern, half an ounce.
Elecampane, two drachms.
Wormwood, a handful.
Santonica, one drachm.
Water, sufficient

to obtain a quart of decoction; add

Vermifuge syrup, one ounce.

Mix. *Bories.*

℞. Powdered male fern, four drachms.
Balm water, three ounces.
Syrup of gum, one ounce.

Mix. To be taken in the evening, and next morning an ounce of castor oil.
Radius.

FŒNICULUM.

Fennel.

There are several varieties, or species of Fennel, closely resembling each other, and having the same properties; that recognized as officinal by the *U. S. Ph.* is the *F. dulce*, a native of Europe, and often cultivated in the gardens in this country.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Linn. Sp. Pl. 377. Griffith, Med. Bot. 321.

The part used is the fruit, which is fragrant, with a sweetish, warm, pleasant, aromatic taste. It is employed as a carminative, and as corrective of other and more unpleasant remedies. The dose of the powder is from a scruple to half a drachm.

Compound Powder of Fennel.

℞. Powdered fennel, } each,
" anise, } each,
" lettuce, } each,
" white poppy, } each,
" benne, } each, one ounce and a half.
" sugar, six ounces.

Mix. Dose, a drachm two or three times a day. Said to increase the secretion of milk in nursing women. *Niemann.*

Infusion of Fennel.

℞. Fennel, one drachm.
Boiling water, one pint.

Infuse for an hour, and strain. Given in teaspoonful doses to infants, in windy colic, or used as an enema, for the same purpose.
Taddei.

Fennel Water.

℞. Oil of fennel, half a fl. drachm.
Carbonate of magnesium, one drachm.
Distilled water, two pints.

Rub the oil with the carbonate, gradually add the water, constantly rubbing, and filter. *U. S. Ph.*

Distilled fennel water is made by distilling, from one part of the bruised fruit and sufficient water, four parts (*Paris Codex*), ten parts (*Brit. Ph.*), fourteen parts (*U. S. Ph.*), thirty parts (*Ph. Germ.*).

Oil of Fennel.

℞ Bruised fennel, at will.
Water, sufficient.

Mix, and distil. *Guibourt.*

Dose, five to fifteen drops.

Essence of Fennel.

℞ Oil of fennel, one fl. ounce.
Alcohol, nine fl. ounces.

Mix. Dose, twenty or thirty drops. *Dub. Ph.*

Fennel Ointment.

℞ Oil of fennel, thirty drops.
Lard, four ounces.

Triturate together. Said to destroy lice in the hair. *Niemann.*

FRASERA.

American Colombo.

The *Frasera Walteri* is one of the tallest and most elegant of our native herbaceous plants, sometimes attaining a height of ten feet, with a pyramid of yellowish-white flowers, of three or four feet in length.

Sex. Syst. Tetrand. monog. *Nat. Syst.* Gentianaceæ.

Walter, Fl. Carol. 87. Griffith, Med. Bot. 462.

The root, which is the officinal portion, is large and succulent, and is usually dried in circular sections, like colombo. It has no odor in a dried state, but possesses a sweetish-bitter taste, which according to G. W. Kennedy is due to gentiopicrin. It is a mild bitter tonic, suited to all cases to which the simple bitters are applicable. The dose, in powder, is from thirty grains to a drachm.

Infusion of American Colombo.

℞ American colombo, bruised, one ounce.
Boiling water, one pint.

Infuse for an hour, and strain. *Wood.*

Dose, one to two fl. ounces several times a day.

Tincture of American Colombo.

℞ Contused American colombo, one ounce.
Diluted alcohol, one pint.

Macerate for fourteen days, and filter. Dose, one to three drachms. *Dunglison.*

FULIGO.

Soot.

The soot of wood is of a black color, has a peculiar smell, and a bitter, disagreeable, empyreumatic taste. It owes its properties to the presence of pyrogenous oil or resin, and creasote; but also contains various salts, united to acetic acid. It was formerly officinal, but gradually was relinquished in regular practice; but, of late years, has again attracted attention, and has been employed with success in a variety of diseases.

Pills of Soot.

℞ Extract of soot, half a drachm.
Comp. galbanum pill, one scruple.
Oil of valerian, ten minims.

Mix well, and form twelve pills; two, thrice a day, in hysteria. *Neligan.*

℞ Soot, one drachm and a half.
Carbonate of ammonium, half a drachm.
Tar, sufficient.

Mix, and make five grain pills. *Ferriar.*

Decoction of Soot.

℞ Soot, two handfuls.
Water, two pints.

Boil for half an hour, and strain. As a lotion, in herpetic, psoric, and venereal ulcers. *Soubeiran.*

Tincture of Soot.

℞ Soot, one part.
Diluted alcohol, eight parts.

Macerate for eight days, and filter. Dose, from thirty to sixty drops, as an antispasmodic in hysteria, etc. *Guibourt.*

Mixture of Soot.

℞ Soot, half an ounce.
Carbonate of potassium, one ounce and a half.
Carbonate of ammonium, two drachms.
Elder-flower water, nine fl. ounces.

Digest for some time by a gentle heat, and filter. Dose, thirty to sixty drops, several times a day. In dyspepsia, suppressed cutaneous affections, etc. *Dunglison.*

℞. Hickory ashes, one quart.
Soot, six ounces.
Boiling water, one gallon.

Mix, and digest for twenty-four hours, frequently stirring, and decant. A teacupful, three times a day, used in dyspepsia. *Ellis.*

Soot Mouth-Wash.

℞. Extract of soot, one part.
Vinegar, twelve parts.

Mix. A few drops, in a glass of tepid water, in aphthous sore mouth. *Soubeiran.*

Oil of Soot.

℞. Soot, four ounces.
Olive oil, twelve ounces.

Boil, and strain. As an application to ulcers in the mouth, or on the genitals. *Radius.*

Soot Ointment.

℞. Soot, one part.
Lard, four parts.

Triturate together. As an application in tinea, scrofulous sores, etc. *Soubeiran.*

Compound Soot Ointment.

℞. Soot,
Lard, each, half an ounce.
Extract of belladonna, one drachm.

Triturate together. As an application to cancerous sores. *Radius.*

℞. Soot, an ounce and a half.
Lard, four ounces.
Sulphate of zinc, six drachms.

Triturate together. In cases of tinea. *Bories.*

Cataplasm of Soot.

℞. Soot, two ounces.
Whites of eggs, six.

Mix. As an application to tinea, herpes, and scrofulous ulcers. *St. Marie.*

Injection of Soot.

℞. Decoction of soot, one pint.
Alum, half an ounce.
Water, six ounces.

Mix. Advised as an injection, in leucorrhœa. *Soubeiran.*

FULIGOKALI.

Fuligokali.

℞. Potassa, twenty parts.
Shining soot, one hundred parts.
Water, sufficient.

Boil for an hour, cool, dilute with water, filter, evaporate to dryness, and keep in well-closed bottles. *Deschamps.*

Used, both internally and externally, in chronic cutaneous disorders. Dose, two to three grains, several times a day.

Sulphuretted Fuligokali.

℞. Fuligokali, sixty parts.
Potassa, fourteen parts.
Sulphur, five parts.

Dissolve the sulphur and potassa, add the fuligokali, and evaporate to dryness.

Pills of Sulphuretted Fuligokali.

℞. Sulphuretted fuligokali, five drachms.
Starch, two drachms and a half.
Tragacanth, eight grains.
Syrup, sufficient.

Mix, and make one hundred pills, and cover them with two or three coats of tragacanth. *Deschamps.*

Ointment of Fuligokali.

℞. Fuligokali, sixteen to thirty grains.
Lard, one ounce.

Triturate together. Used as a detersive, resolvent, and somewhat stimulant application, in obstinate cutaneous affections. *Gibert.*

G.

GALBANUM.

Galbanum.

This is the gum resin of an unknown plant, but generally admitted to belong to the Apiaceæ. According to Don and others, the Asiatic galbanum is the product of *Galbanum officinale*, a native of Persia. Boissier refers it to *Ferula erubescens*.

Don, Trans. Linn. Soc. xvi. 603. Griffith, Med. Bot. 333.

Galbanum is in whitish or yellowish tears, or in brownish-yellow or brownish masses, formed of these tears agglutinated, and containing various impurities. The odor is peculiar, and somewhat balsamic; the taste is hot, bitter, and acrid. It is stimulant, expectorant, and antispasmodic, in doses of ten to twenty grains; and also used externally to indolent swellings, etc.

Purified Galbanum.

℞ Galbanum, in small pieces, three parts.
Water, two parts.

Digest in a tared capsule until the gum resin is completely divided, add sufficient stronger alcohol to form with the water of the emulsion a menstruum of sixty per cent. alcoholic strength; boil for a minute, strain with expression through moderately coarse muslin, and evaporate by means of a water-bath, to the proper consistence.

Paris Codex.

Compound Galbanum Pills.

℞ Galbanum,
Myrrh, each, thirty-six grains.
Assafetida, twelve grains.
Syrup, sufficient.

Beat into mass, and divide into twenty-four pills. *U. S. Ph.*

Dose, two to four, in chlorosis and hysteria.

℞ Assafetida, Galbanum, Myrrh, each, two ounces.
Molasses, one ounce.

Heat by a water-bath and stir until the mass assumes a uniform consistence.

It is called Compound Pill of Assafetida by *Brit. Ph.*

Dose, five to ten grains.

℞ Galbanum, two drachms.
Oil of savine, four to twelve drops.
Malate of iron, one drachm and a half.
Powdered valerian, sufficient.

Beat into mass, and divide into one hundred and twenty pills. Two three times a day, in amenorrhœa, chlorosis, etc.

Phœbus.

Galbanum Mixture.

℞ Galbanum, two drachms.
Vinegar of squill,
Fennel water, each, two fl. ounces.
Spirit of Mindererus, two fl. drachms.
Spirit of nitrous ether, one fl. drachm.
Syrup of mallows, half fl. ounce.

Mix. Three or four spoonfuls a day, in humid asthma. *Jahn.*

Tincture of Galbanum.

℞ Galbanum, in small pieces, two ounces.
Proof spirit, two pints.

Digest for seven days, and filter.

Dub. Ph. 1826.

Antispasmodic, etc. In doses of one to three fl. drachms.

Compound Tincture of Galbanum.

℞ Tincture of galbanum, " wormwood, Spirit of rosemary, equal parts.

Mix. Dose, forty to fifty drops.

Augustin.

Galbanum Plaster.

℞ Lead plaster, eight ounces.
Galbanum, Ammoniacum, Yellow wax, each, one ounce.

Melt the galbanum and ammoniac, and strain: then add the plaster and wax, previously melted, and mix. *Brit. Ph.*

℞ Turpentine, five parts.
Yellow wax, eight parts.

Melt together, and add

Galbanum, softened by vinegar, twelve parts.

Mix. *Span. Ph.*

Compound Galbanum Plaster.

℞. Galbanum, eight troyounces.
Turpentine, one troyounce.
Burgundy pitch, three troyounces.
Lead plaster, thirty-six troyounces.

Melt the galbanum and turpentine together, strain, add the pitch, and then the lead plaster, melted; mix well. *U. S. Ph.*

This resembles the *compound diachylon plaster* of *Ph. Germ.*, and the *gummy diachylon plaster* of *Paris Codex.*

A good application to chronic scrofulous enlargements of the glands and joints.

℞. Galbanum and saffron plaster, eight parts.
Camphor, } each,
Petroleum, } one
Carbonate of ammonium, } part.

Melt together. In chronic rheumatism. *Augustin.*

Galbanum Plaster with Saffron.

℞. Lead plaster, twenty-four parts.
Yellow wax, eight parts.

Melt, and when nearly cold, add

Purified galbanum, twenty-four parts,

previously dissolved by the aid of a water-bath in

Common turpentine, six parts.

Then add

Powdered saffron, one part,

previously beaten, with some alcohol, into a pulpy mass. Mix well, and form into rolls. *Ph. Germ.*

℞. Yellow wax, } each, six parts.
Resin, }
Burgundy pitch, }

Melt together, and add, diffused in

Common turpentine, three parts.
Powdered ammoniac, galbanum, each, two parts.

Afterwards add the mixture of

Powdered mastic, } each, two
" myrrh, } parts.
" olibanum, }
" saffron, one part.

Mix thoroughly. This is the *emplastrum oxycroceum*, much employed in Europe. *Ph. Germ.*

GALIUM VERUM.

Yellow Ladies-Bedstraw.

A perennial, herbaceous plant, native of Europe, which is stated to have the power of coagulating milk, and also used to dye yellow.

Sex. Syst. Tetrand. monog. *Nat. Syst.* Rubiaceæ.

Linn. Sp. Pl. 155. Stokes, Bot. Mat. Med. i. 202.

The whole plant is used; it has an agreeable odor, and an astringent, acidulous, somewhat acrid taste. It was at one time much used in epilepsy and hysteria, and also as an application in cutaneous affections.

Infusion of Yellow Ladies-Bedstraw.

℞. Flowers of yellow ladies-bedstraw, two drachms.
Boiling water, two pints.

Digest for an hour, and strain. To be taken in a tepid state, in wineglassful doses, as a sedative and antispasmodic, in cerebral affections. *Chaussier.*

Wine of Yellow Ladies-Bedstraw.

℞. Expressed juice of yellow ladies-bedstraw, six fl. ounces.
White wine, one to two fl. ounces.

Mix. To be taken in epilepsy, as soon as indications of an attack manifest themselves. *Bories.*

GALLA.

Galls.

Galls are morbid excrescences on *Quercus infectoria*, caused by the puncture of a hymenopterous insect, the *Diplolepis gallæ tinctoriæ*. They come from the Levant ports, and present several varieties, the best of which are dark colored. They are round, hard, solid, brittle, inodorous, and have a bitter, very astringent taste. They contain tannic and gallic acids. They are powerfully astringent. They are more used as external applications than as internal remedies. Dose, ten to thirty grains, several times a day.

Compound Powder of Galls.

℞. Powdered galls, " kino, each, half an ounce.
Powdered alum, two drachms.

Mix. As a styptic. *Radius.*

Decoction of Galls.

℞. Galls, half an ounce.
Water, one pint and a half.

Boil to a pint, and strain.

℞. Bruised galls, two ounces and a half.
Water, two pints.

Boil to a pint, and strain. *Lond. Ph.*

Infusion of Galls.

℞. Powdered galls, one to two drachms.
Boiling water, one pint.

Digest for an hour, and strain. Used for injections, fomentations, gargles, etc. *Taddei.*

Compound Infusion of Galls.

℞. Infusion of galls, four fl. ounces.
Prepared chalk, half an ounce.
Tincture of opium, half fl. drachm.
Powdered gum Arabic, one drachm.

Mix. Dose, a tablespoonful every two hours. In diarrhœa. *Ellis.*

Gargle of Galls.

℞. Infusion of galls, seven fl. ounces.
Alcohol, one fl. ounce.

Mix. As a gargle in relaxation of uvula and soft palate. *Ellis.*

Lotion of Galls.

℞. Claret wine, one pint.
Common salt, one drachm.
Sulphate of iron, two drachms.

Boil for a few minutes, and add

Oxide of copper, one drachm.

Boil for two minutes. Add

Powdered galls, two drachms.

This is used to color the hair; it is to be washed with this fluid, dried with a warm cloth, and then washed with common water. *Laforest.*

Aromatic Syrup of Galls.

℞. Bruised galls, four drachms.
Brandy, eight fl. ounces.
Powdered cinnamon,
" mace,
each, two drachms.

Digest for two hours, and then burn off the brandy, holding some lumps of sugar in the flame; strain; decant. Dose, a tablespoonful every two hours. In obstinate chronic diarrhœa. *Parrish.*

℞. Powdered galls, half a troyounce.
" cinnamon,
" nutmeg,
each, two drachms.
Glycerin, six drachms.
Syrup, six fl. ounces.
Brandy, sufficient.

Obtain from the mixed powders, with brandy, six fl. ounces of tincture, add the glycerin, evaporate at 125° to three fl. ounces, filter, and mix with the syrup. *D. G. Potts.*

Tincture of Galls.

℞. Galls, in powder, No. 50, four troyounces.
Diluted alcohol, sufficient.

Obtain by percolation two pints. *U. S. Ph.*

The tincture of *Brit. Ph.* is of about the same strength.

℞. Bruised galls, one part.
Alcohol, sp. gr. 892, five parts.

Macerate for a week, express, and filter. *Ph. Germ.*

A powerful astringent, in doses of one to three fl. drachms.

℞. Bruised galls, one pound.
Water, two pints.

Macerate twenty-four hours, and add

Alcohol, two pints.
Eau de Cologne, six fl. ounces.

Filter. As an injection, diluted with water, in leucorrhœa and gonorrhœa. *Gibert.*

Extract of Galls.

℞. Galls, in coarse powder, at will.

Macerate in sufficient water to cover them for twenty-four hours; then introduce the moist mass into a displacer, and act on it with water, until the galls are nearly exhausted; evaporate the infusion to dryness, on a water-bath.

Ointment of Extract of Galls.

℞. Extract of galls, one drachm.
Lard, one ounce.

Triturate the extract with a little water, until it is reduced to a uniform syrupy consistence, then add the lard, and mix thoroughly. *D. S. Jones.*

Ointment of Galls.

℞. Galls, in very fine powder, sixty grains.
Lard, four hundred and twenty grains.

Mix thoroughly. As an application to piles, prolapsus ani, and to indolent ulcers. *U. S. Ph.*

℞. Galls, in fine powder, eighty grains.
Benzoinated lard, one ounce.

Mix thoroughly. *Brit. Ph.*

Compound Ointment of Galls.

℞. Ointment of galls, one ounce.
Powdered opium, thirty-two grains.

Mix thoroughly. This is the ointment of galls and opium of *Brit. Ph.*

As an application to irritable piles, etc.

℞. Powdered galls,
Tincture of opium, each, two parts.
Camphor, one part.
Lard, eight parts.

Triturate well together. As an application to painful piles. *Foy.*

℞. Finely powdered galls, one scruple.
Simple cerate, one ounce.
Essence of lemon, twenty drops.
Lead water,
Laudanum, each, forty drops.

Rub well together. As an application to hemorrhoids, after subsidence of inflammation. *Dewees.*

GAMBOGIA.

Gamboge.

This is the gum resin of *Garcinia morella*, var. *pedicellata* (*Garcinia gutta*, Wight), a tree growing in Siam and other portions of the East Indies.

Sex. Syst. Polyand. monog. *Nat. Syst.* Clusiaceæ.

Graham, Comp. Bot. Mag. ii. 199. Griffith, Med. Bot. 152.

Gamboge, also called cambage and gutti, is a gum resin, of a yellow-orange color, opaque, brittle, almost inodorous, of an insipid taste at first, but soon becoming acrid. It is a powerful hydragogue and drastic purgative, but apt to produce nausea and vomiting. Dose, from one to six grains, in pill, emulsion, or alkaline solution.

Compound Powder of Gamboge.

℞. Bitartrate of potassium, two drachms.
Powdered jalap, one drachm.
" gamboge, six grains.

Mix, and divide into six powders. One to be given every two or three hours, in syrup, as a hydragogue purgative. *Ellis.*

℞. Powdered gamboge, two grains.
" sulphate of iron, six grains.
" sugar, one scruple.
Oil of peppermint, three drops.

Mix. To be taken twice a day, against tapeworm. *Vogt.*

Compound Pills of Gamboge.

℞. Powdered gamboge, } each,
" Barbadoes aloes, } one
Compound powder of cinnamon, } ounce.
Hard soap, in powder, two ounces.
Syrup, sufficient.

Mix, and beat into a uniform mass. Dose, five to ten grains. *Brit. Ph.*

℞. Powdered gamboge, ten grains.
" guaiacum,
Blanched almonds, each, one drachm.
Syrup, sufficient.

Beat together, and form twenty-eight pills. Two to four, as a gentle purgative. *Saunders.*

Alkaline Solution of Gamboge.

℞. Powdered gamboge, one drachm.
Carbonate of potassium, three drachms.
Water, six fl. drachms.

Dissolve. Dose, fifteen drops every three hours, as a hydragogue in dropsies. *Van Mons.*

Gamboge Mixture.

℞. Powdered gamboge, four grains.
Spirit of nitrous ether, one fl. drachm.
Tincture of senna, two fl. drachms.
Mint water,
Syrup of buckthorn, each, half a fl. ounce.

Mix. As a hydragogue purgative, in dropsy, especially in hydrothorax. *Ferriar.*

℞. Gamboge, two scruples.
Tartrate of potassium, one ounce.
White sugar, two drachms.
Water, six ounces.

Make a solution. As a purgative in ascites. A tablespoonful, every two or three hours, until it operates. *Dewees.*

Gamboge and Elaterin Mixture.

℞. Gamboge, four grains.
Elaterin, half a grain.
Sweet spirit of nitre, one ounce.
Water, four ounces.

Mix. As a hydragogue purgative, in ascites. A tablespoonful, to be taken every two or three hours, until free purgation is induced. *Dewees.*

Alkaline Tincture of Gamboge.

℞. Gamboge, one part.
Carbonate of potassium, two parts.
Diluted alcohol, twenty-four parts.

Digest for some days, and filter. *Scherf.*

Ammoniacal Tincture of Gamboge.

℞. Gamboge, thirty-six grains.
Spirit of ammonia, four fl. ounces.

Digest for eight days, and filter. Dose, one to two fl. drachms. *Swediaur.*

GAULTHERIA.

Partridge Berry.

The leaves of *Gaultheria procumbens*, a small, indigenous, evergreen plant, found in most parts of the United States, in dry, sandy situations.

Sex. Syst. Decand. monog. *Nat. Syst.* Ericaceæ.

Kalm, Amœn. Acad. iii. 14. Griffith, Med. Bot. 424.

These leaves have a peculiar aromatic taste and odor, with a little astringency. They are stimulant, and somewhat tonic and astringent; and are much used in the form of tea, in bowel diseases, and as an emmenagogue.

Oil of Partridge Berry.

℞. Leaves of partridge berry, at will.
Water, sufficient.

Distil, and collect the oil that passes. *U. S. Ph.*

Principally used to flavor mixtures, etc. In large doses, is poisonous. Dissolved in diluted alcohol, is in common use as a carminative and stimulant.

Partridge-Berry Water.

℞. Oil of partridge berry, sixteen drops.
Carbonate of magnesium, one drachm.
Water, one pint.

Triturate the oil, magnesia, and a little of the water together, then add the rest of the water, and filter.

GELSEMIUM.

Yellow Jasmine.

G. sempervirens is indigenous in the southern portion of this country; it is a high climbing shrub with opposite and entire ovate-lanceolate shining leaves, and showy, yellow, fragrant flowers.

Sex. Syst. Pentand. monogyn. *Nat. Syst.* Loganiaceæ.

The root is the officinal part; it comes in pieces varying in length and thickness, and consisting of a hard, woody central portion covered with a brownish-gray bark; the latter has a persistent aromatic odor, and a balsamic and bitter taste. It contains an alkaloid, gelseminia, which is probably the active principle, and a peculiar crystallizable acid called gelseminic acid. It is a nervous and arterial sedative, poisonous in overdoses, and has been recommended in pneumonia, pleurisy, neuralgia, intermittent and yellow fever. Dose, three to ten grains, usually in the form of tincture or fluid extract.

Tincture of Yellow Jasmine.

℞. Powdered yellow jasmine root, four troyounces.
Diluted alcohol, twelve fl. ounces.

Macerate for two weeks, and filter. Dose, twenty to forty drops. *Maryland Coll. Ph.*

Fluid Extract of Yellow Jasmine.

℞. Yellow jasmine, in powder, No. 80, sixteen troyounces.
Alcohol, sufficient.

Moisten the powder with four fl. ounces of alcohol, pack in a percolator, add twelve fl. ounces of alcohol, and macerate for four days; then with alcohol displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remaining tincture to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, three to five minims, gradually increased.

GENTIANA.

Gentian.

The roots of several species of gentian are used in medicine; but that which is most generally recognized as officinal is *Gentiana lutea*, a tall, perennial plant, native of the mountains of Europe.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Gentianaceæ.

Linn. Sp. Pl. 329. Griffith, Med. Bot. 460.

The root is of a grayish-brown color externally, and yellowish within; it has a slightly sweetish, but extremely bitter taste, residing in a principle called gentiopicrin, and a faint but peculiar odor. It is a pure and simple bitter tonic, with no astringency. The dose of the powder is from ten to forty grains, but is seldom given in this form. The principle formerly called gentianin is crystallizable gentisic acid, having a yellow color.

The root of *G. Catesbœi*, of this country, is sometimes used like the preceding.

Compound Powder of Gentian.

℞ Powdered gentian, } each,
" cascarilla, } one
" orange-peel, } drachm.
Peppermint sugar, three drachms.

Mix. Dose, thirty grains, several times a day, as a stomachic. *Augustin.*

Extract of Gentian.

℞ Gentian, in powder,
No. 40, twelve troyounces.
Water, sufficient.

Exhaust the powder by means of displacement. Boil the liquid to three-fourths of its bulk, strain, and evaporate to proper consistence. *U. S. Ph.* and *Paris Codex.*

The process of *Ph. Germ.* is similar, maceration and expression being directed in place of percolation.

℞ Gentian, sliced, one pound.
Boiling distilled water, ten pounds.

Infuse for two hours, boil for fifteen minutes, pour off, press, and strain; then evaporate to the proper consistence. *Brit. Ph.*

Dose, ten to thirty grains, as a tonic; also as a basis for various metallic pills.

Compound Gentian Pills.

℞ Powdered aloes, one drachm.
Extract of gentian, half a drachm.
Oil of caraway, ten drops.
Syrup, sufficient.

Beat into mass, and form pills of four grains. Two or three for a dose, as a purgative. *Ellis.*

℞ Extract of gentian, } equal parts.
Powdered rhubarb, } equal parts.
Soap, } equal parts.
Water, sufficient.

Beat into mass, and form four grain pills. Tonic and laxative. *Fulda Dis.*

Fluid Extract of Gentian.

℞ Gentian, in powder,
No. 40, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Mix the liquids, moisten the powder with four fl. ounces of the mixture, pack into a percolator, add the remaining liquid, and macerate for four days; then, with diluted alcohol, percolate twenty-four fl. ounces, reserving the first fourteen; add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with the reserved portion. *U. S. Ph.*

Infusion of Gentian.

℞ Contused gentian, one drachm.
Cold water, twenty-five ounces.

Infuse for four hours, and strain. *Paris Codex.*

Compound Infusion of Gentian.

℞ Gentian, in powder,
No. 40, half a troyounce.
Bitter orange-peel, in powder,
No. 40,
Coriander, in powder,
No. 40, each, sixty grains.
Alcohol, two fl. ounces.
Water, fourteen fl. ounces.

Moisten the powders with three fl. drachms of the mixed liquids, pack firmly into a percolator, add the remaining mixture, and finally water to obtain one pint. *U. S. Ph.*

Dose, a fl. ounce, as a tonic.

A preparation scarcely differing from the foregoing is now called *Gentian Mixture* by the *Brit. Ph.*

℞ Gentian, sliced,
Bitter orange-peel, cut,
each, sixty grains.
Fresh lemon-peel, cut, a quarter ounce.
Boiling distilled water, ten fl. ounces.

Infuse for an hour, and strain. *Brit. Ph.*

Weaker than the preceding. Dose, one to two fl. ounces.

R. Bruised gentian,
" calamus, each, one ounce.
Centaury, six drachms.
Rosemary, two drachms.
Boiling water, four pints.

Infuse for twelve hours, and strain. Used as an emmenagogue, in doses of three ounces, twice a day. *Spielmann.*

Infusion of Gentian with Rhubarb.

R. Bruised gentian, one drachm.
" rhubarb, two drachms.
Boiling water, twelve fl. ounces.

Macerate for an hour, strain, and add

Carbonate of ammonium, two scruples.

Dose, one to two fl. ounces, in dyspepsia, chronic rheumatism, etc.
Steph. and Church.

Mixture of Gentian.

R. Carbonate of magnesium, one drachm.
Infusion of gentian, six fl. ounces.

Mix. A wineglassful three times a day, as an antilithic, where uric acid abounds.
Brande.

See also Compound infusion of gentian.

R. Extract of gentian, two drachms.
Carbonate of potassium, two scruples.
Mint water, five fl. ounces.
Tincture of orange-peel, five fl. drachms.
Sugar, one ounce.

Mix. A spoonful three times a day, as a stomachic and carminative. *Berends.*

Concentrated Infusion of Gentian.

R. Gentian, in powder, two troyounces.
Orange-peel, "
Coriander, " each, half a troyounce.
Diluted alcohol, sufficient.

Make a pint of tincture by percolation. For compound infusion of gentian add four fl. ounces of this tincture to twelve fl. ounces of water. Thus made, it contains the proper proportion of alcohol, and is of officinal strength in gentian, orange-peel, and coriander. *Shinn.*

Wine of Gentian.

R. Gentian, bruised, three parts.
Alcohol, of 60 pr. ct., six parts.

Macerate for twenty-four hours, and add

French red wine, one hundred parts.

Macerate for ten days, express, and filter.
Paris Codex.

Ferrated Elixir of Gentian.

R. Pyrophosphate of iron, two hundred and fifty-six grains.
Water, two fl. ounces.
Curaçoa cordial, six fl. ounces.
Fluid extract of gentian, two fl. ounces.
Sherry wine, sufficient

to make one pint. Dose, one to two teaspoonfuls. *W. B. Thompson.*

Compound Wine of Gentian.

R. Gentian, coarsely powdered, half an ounce.
Yellow bark, coarsely powdered, one ounce.
Orange-peel, two drachms.
Canella, in coarse powder, one drachm.
Proof spirit, four fl. ounces and a half.
Sherry wine, thirty-six fl. ounces.

Digest the root and barks in the spirit for twenty-four hours; add wine, digest for seven days, express, strain, and filter.
Ed. Ph.

A stomachic bitter, in doses of four to eight fl. drachms.

Syrup of Gentian.

R. Bruised gentian, one part.
Boiling water, sufficient.

Macerate for six hours, express, strain, and obtain ten parts of infusion; add

Sugar, nineteen parts.

Dissolve. Dose, a teaspoonful to a tablespoonful. *Paris Codex.*

Syrup of Extract of Gentian.

R. Aqueous extract of gentian, two drachms.
Water, eight fl. ounces.
Sugar, sixteen ounces (avoir.).

Dissolve the extract in the water, add the sugar, and form a syrup with a gentle heat, and strain. *W. Procter.*

Tincture of Gentian.

℞. Gentian, one part.
Alcohol, of 60 pr. ct., five parts.

Macerate for ten days, express, and filter. Dose, one to two fl. drachms.
Paris Codex and *Ph. Germ.*

Acidulated Tincture of Gentian.

℞. Compound tincture of gentian, four fl. ounces.
Elixir of vitriol, half fl. drachm.

Mix. A teaspoonful, in sugar and water, three or four times a day. *Ellis.*

Compound Tincture of Gentian.

℞. Gentian, in powder, No. 50, two troyounces.
Orange-peel, in powder, No. 50, one troyounce.
Cardamom, in powder, No. 50, half a troyounce.
Diluted alcohol, sufficient.

Obtain by displacement two pints.
U. S. Ph.

The corresponding tincture of *Brit. Ph.* is about one-seventh stronger.

An excellent bitter tonic, in dose of one to two fl. drachms.

Ammoniacal Tincture of Gentian.

℞. Bruised gentian, one ounce.
Carbonate of ammonium, two drachms.
Diluted alcohol, two pints.

Macerate the root in the alcohol for eight days, filter, and add the ammonia. Dose, one to four fl. drachms, in scrofula.
Taddei.

Alkaline Tincture of Gentian.

℞. Bruised gentian, ten parts.
Carbonate of sodium, three parts.
Alcohol, of 60 per ct., three hundred parts.

Macerate for ten days, and filter. Used in same cases, and same doses, as the former.

This is the *Compound tincture of gentian* of *Paris Codex.*

Mixture of Tincture of Gentian.

℞. Tincture of gentian, one fl. ounce and a half.
Tincture of rhubarb,
" cinnamon,
each, half fl. ounce.
" opium, ten drops.

Mix. A dessertspoonful every hour, in diarrhœa. *Foy.*

℞. Extract of gentian,
" cascarilla,
each, two drachms.
Peppermint water, four fl. ounces.

Mix. In spoonful doses, as a tonic and stomachic. *St. Marie.*

Gentian and Sulphuric Acid Mixture.

℞. Compound infusion of gentian, five fl. ounces.
Compound tincture of gentian, one fl. ounce.
Diluted sulphuric acid, one fl. drachm.

Mix. A tablespoonful, three times a day, in dyspepsia. *Brande.*

GERANIUM.

CRANESBILL.

This is the rhizome of *Geranium maculatum*, a native, perennial plant, found, in most parts of the country, in woods and shady places.

Sex. Syst. Monadelph. decand. *Nat. Syst.* Geraniaceæ.

Linn. Sp. Pl. 955. Griffith, Med. Bot. 209.

The root is in small rough pieces, of a dark-brown color externally, and flesh-colored within. It is inodorous; the taste is astringent, but not bitter. The dose is from ten to thirty grains, as an astringent, in all cases in which kino or rhatany is found useful.

Decoction of Geranium.

℞. Geranium, one ounce.
Water, one pint and a half.

Boil down to a pint. Dose, from one to two fl. ounces. *Wood.*

Aromatic Syrup of Geranium.

℞. Powdered geranium, three troyounces.
" cinnamon, sixty grains.
" cloves,
" nutmeg, each, thirty grains.
Sugar, eight troyounces.
Diluted alcohol, sufficient.

Obtain from the mixed aromatics by percolation half a fl. ounce, and from the geranium one pint of tincture; evaporate the latter to four fl. ounces, filter, dissolve in it the sugar, strain, and add the aromatic tincture. *D. G. Potts.*

Dose, a teaspoonful.

Fluid Extract of Geranium.

R. Geranium, in powder,
No. 50, sixteen troyounces.
Glycerin, three fluidounces.
Water, five fluidounces.
Alcohol, eight fluidounces.

Mix the liquids, moisten the powder with four fl. ounces of the mixture, pack into a percolator, add the remaining liquid, and macerate for four days. Then with diluted alcohol displace twenty-four fluidounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, ten to thirty minims.

Extract of Geranium.

R. Bruised geranium
root, one pound.
Water, one gallon.

Boil down to one-half, strain, and evaporate to due consistence. This extract is very similar to that of Rhatany, and may be given in the same cases and in the same doses.

GEOFFROYA INERMIS.

Cabbage-Tree Bark.

The Cabbage-Tree is a native of the West India Islands; it is a large tree, having a smooth, gray bark.

Sex. Syst. Diadelph. decand. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 1043. Griffith, Med. Bot. 247. (Andira.)

The bark is in long, fibrous pieces, of a brownish-ash-color externally, and yellowish within; it has a resinous fracture, an unpleasant odor, and a sweetish, mucilaginous, bitterish taste. It is a powerful vermifuge, in doses of a scruple to half a drachm. The best form of administration is in syrup.

Decoction of Cabbage-Tree Bark.

R. Cabbage-tree bark, one ounce.
Water, two pints.

Boil down to one pint, and strain. Dose, one to two fl. ounces. *Ellis.*

Extract of Cabbage-Tree Bark.

R. Cabbage-tree bark, one part.
Water, eight parts.

Boil for a quarter of an hour, strain; add four parts of water, boil, and strain; evaporate the united decoctions to a proper consistence. Dose, three grains. *Belg. Ph.*

Mixture of Cabbage-Tree Bark.

R. Cabbage-tree bark, half an ounce.
Water, six ounces.

Boil for half an hour, strain, and add

Tincture of cabbage-tree
bark, one ounce.
Syrup of orange,
peel, half an ounce.

A tablespoonful, morning and evening.
Niemann.

GEUM.

Avens.

1. GEUM RIVALE.

Water Avens.

This plant is a native of Europe and the United States, in wet, boggy situations.

Sex. Syst. Icosand. polyg. *Nat. Syst.* Rosaceæ.

Linn. Sp. Pl. 717. English Bot. 1, 106.

Root reddish or purplish, hard and brittle, inodorous, of an astringent, bitterish taste. It is tonic and astringent, and has been used advantageously in passive hemorrhages, leucorrhœa, etc. The dose, in powder, is from a scruple to a drachm, three times a day.

Decoction of Water Avens.

R. Water avens root, one ounce.
Water, one pint and a half.

Boil down to a pint, and strain. To be given in doses of one or two fl. ounces.

2. GEUM VIRGINIANUM.

White Avens.

Also a native of the United States, growing in woods and along streams. Flowers small and white.

Linn. Sp. Pl. 719. Griffith, Med. Bot. 279.

The root is of a brown color, somewhat aromatic, and of a bitterish, astringent taste. It has the same properties as the *G. Rivale*, and is given in the same cases and doses.

3. GEUM URBANUM.

Avens.

A native of Europe, growing in woods and waste places. The flowers are small, and of a yellow color.

Linn. Sp. Pl. 716. Eng. Bot. i. 1400.

The root called *clove root* in Europe, con-

sists of a short caudex with many long fibres. When fresh, it has somewhat the odor of cloves, but when dry, is almost inodorous. The taste is bitter and astringent. Like the other species, it is tonic and astringent.

Compound Powder of Avens.

℞. Powdered avens root,
" gum Arabic,
each, three drachms.
" kino,
" cinnamon,
each, one drachm.
" sugar, half an ounce.

Mix. A teaspoonful every two or three hours, in diarrhœa. *Vogel.*

Mixture of Avens.

℞. Bruised avens, one ounce.
Water, twelve fl. ounces.

Boil to eight ounces, and to the strained cold decoction, add

Extract of avens, two drachms.
Sulphuric ether, one drachm.

Mix. Two spoonfuls every two hours. As a febrifuge. *Radius.*

GILLENIA.

Indian Physic.

This is the root of *Gillenia trifoliata* and *G. stipulacea*, native herbaceous plants, found in most parts of the country, in shady and rather marshy situations.

Sex. Syst. Icosand. pentag. *Nat. Syst.* Rosaceæ.

Mœnch, Sp. Pl. 286. Griffith, Med. Bot. 282.

The roots are about as thick as a quill, wrinkled longitudinally, and irregularly undulated; a light brown color, and consisting of a thick cortical portion, and slender ligneous centre. The bark is of a disagreeable, bitter taste. It is a mild and certain emetic, and forms a good substitute for ipecacuanha. The dose is from twenty to thirty grains, to be repeated in half an hour if it does not produce the desired effect.

GLYCERINA.

Glycerin.

℞. Lead plaster, recently prepared, and fluid,
Boiling water, each, one gallon.

Mix, stir briskly for fifteen minutes, cool, and pour off the supernatant liquid. Evaporate this to the sp. gr. 1.15, and pass a current of sulphuretted hydrogen slowly through it while a black precipitate is thrown down. Filter, boil, and evaporate until the liquid ceases to lose weight.

U. S. Ph. 1850.

In a pure state it is a nearly colorless, viscid fluid, and is uncrystallizable. Sp. gr. 1.25.

Glycerin is now made by decomposing fats and distilling by steam under high pressure.

It has been used with success in lotions, poultices, baths, etc., to render them emollient and soothing; in diseases of the skin, as pityriasis, impetigo, chapped hands, nipples, face, etc.

Lotion of Glycerin.

℞. Glycerin, one fl. drachm.
Borax, ten grains.
Rose water, seven fl. drachms.

Mix. Used as a lotion in lichen, three times a day; also in chapped hands.

Clymer.

Glycerin Ointment.

℞. Spermaceti, half an ounce.
White wax, one drachm.
Oil of almonds, two fl. ounces.
Glycerin, one fl. ounce.

Melt the wax and spermaceti with the oil of almonds at a moderate heat, add the glycerin, and rub until well mixed and cold.

Used to protect and soothe inflamed surfaces. *J. H. Ecky.*

℞. White wax,
Spermaceti, each, one ounce and a half.
Lard, five ounces.
Glycerin, one fl. ounce.

Melt the wax and spermaceti, add the lard and stir till the mixture thickens, then add the glycerin and mix thoroughly.

Used as a substitute for spermaceti cerate. *J. Laidley.*

Glycerin of Starch.

℞. Starch, one ounce.
Glycerin, eight fl. ounces.

Rub together in a porcelain dish, heat gradually to 240°, constantly stirring until a translucent jelly is formed. *Brit. Ph.*

℞. Powdered starch, one part.
Glycerin, fifteen parts.

Mix and heat gradually until a gelatinous mass results. *Paris Codex.*

℞. Starch, two parts.
Distilled water, one part.

Triturate together, and add

Glycerin, ten parts.

Heat by a water-bath until a diaphanous mass results. *Ph. Germ.*

This has also been called *plasma* and *glycamyl*; by the *Codex*, *glycerate of starch*; and by the *Ph. Germ.*, *glycerin ointment*.

Glycerin Paste.

℞ Gum Arabic, one ounce.
Boiling water, two fl. ounces.
Glycerin, two fl. drachms.

Dissolve the gum in the water, add the glycerin, and strain if necessary.

P. B. Goddard.

GLYCYRRHIZA.

Liquorice Root.

Several species of this genus have sweet and demulcent roots, but the only officinal species of the *U. S. Ph.* is the *G. glabra*, a native of the south of Europe, and of some parts of Asia and Africa, and also successfully cultivated in more northern regions.

Sex. Syst. Diadelph. decand. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 1046. Griffith, Med. Bot. 236.

The root is in long pieces of various thicknesses, of a grayish-brown color externally, and yellowish within; it is inodorous, and of a sweet, mucilaginous taste, with a slight degree of acridity. The root of *G. echinata*, which is recognized by several European pharmacopœias, is known in commerce as Russian liquorice root, thicker than the former, lighter, and sweeter, and comes usually deprived of the bark. It is an excellent demulcent, and is much used in affections of the mucous membranes, and as an addition to the more irritating or nauseous remedies, to abate their acrimony or conceal their taste.

Extract of Liquorice.

℞ Liquorice root, in coarse powder, one pound.
Distilled water, five pounds.

Macerate the root with one-half the water for twelve hours, then with the other half for six hours, express, strain, heat to 212°, strain, and evaporate by a water-bath to a pillular consistence. *Brit. Ph.*

Ph. Germ. proceeds nearly in like manner. *Paris Codex* exhausts with cold water by percolation, and otherwise proceeds as above. Other pharmacopœias recognize the commercial extract, which is made on the large scale by boiling the root with water, straining, and evaporating.

Refined Liquorice.

℞ Commercial liquorice, at will.

Pack in a suitable vessel alternately with layers of washed straw, cover with cold water, macerate for thirty-six hours, draw off the clear liquid, repeat the maceration until exhausted, and evaporate to the consistence of an extract.

This is the *purified liquorice juice of Ph. Germ.* Preferable for mixtures, on account of its complete solubility in water, to the powdered liquorice.

Liquorice Paste.

℞ Extract of liquorice, one part.
Gum Arabic, two parts.
Sugar, one part.
Water, six parts.

Dissolve the extract in the water, afterwards the gum and sugar; evaporate to the consistence of a pill mass; roll this into thin sheets upon an oiled slab, cut into small pieces, and dry. *Paris Codex.*

This is the *black* liquorice paste; in a similar manner is prepared the *brown liquorice paste* from the following ingredients:—

℞ Extract of liquorice, one part.
Water, twenty-five parts.
Gum Arabic, fifteen parts.
Sugar, ten parts.
Extract of opium, one hundredth part.

In liquorice paste, *Ph. Germ.*, the opium is omitted.

Lozenges of Liquorice.

℞ Extract of liquorice,
Gum Arabic, each, six ounces.
Sugar, one pound.

Dissolve in sufficiency of boiling water, evaporate on water-bath, to proper consistence for lozenges. *Ed. Ph.*

Lozenges of Liquorice and Opium.

℞ Powdered extract of opium, twenty-four grains.
Powdered liquorice, two troyounces.
" gum Arabic, one troyounce.
" sugar, three troyounces.
Oil of anise, fifteen minims.

Mix the powders well, add the oil of anise, form mass with water, and divide into four hundred and eighty troches. *U. S. Ph.*

Each lozenge contains one-twentieth of a grain of extract of opium.

℞. Powdered liquorice, } each,
" gum Arabic, } two
" sugar, } drachms.
" opium, six grains.
Oil of anise, four drops.

Mix, and with sufficient water form mass, and divide into sixty lozenges. These are known as *Dr. Wistar's cough lozenges.* *Ellis.*

Both the above are demulcent and anodyne, and are well suited to allay cough, where opium is permissible.

Compound Liquorice Powder.

℞. Liquorice root,
Senna, each, two parts.
Fennel,
Purified sulphur, each, one part.
Sugar, six parts.

Mix the powders thoroughly. *Ph. Germ.*

A mild aperient and demulcent.

Fluid Extract of Liquorice Root.

℞. Liquorice root, in powder,
No. 60, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Mix the liquids, moisten the powder with four fl. ounces of the mixture, pack into a percolator, add the remaining mixture, and macerate for four days. Then displace with diluted alcohol twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Mixture of Liquorice.

℞. Powdered liquorice, one drachm.
Chamomile water, one fl. ounce.
Syrup of mallow, four fl. ounces.

Mix. In spoonful doses, to allay cough. *Foy.*

Compound Mixture of Liquorice.

℞. Powdered liquorice, } each,
" gum Arabic, } half an
Sugar, } ounce.
Paregoric, two fl. ounces.
Antimonial wine, one fl. ounce.
Spirit of nitrous ether, half a fl. ounce.
Water, twelve fl. ounces.

Rub the liquorice, gum, and sugar with the water gradually poured on them; then add the other ingredients and mix. *U. S. Ph.*

℞. Powdered liquorice,
" gum Arabic,
each, two drachms.
Boiling water, four fl. ounces.

Mix, and dissolve, then add

Spirit of nitrous ether,
Antimonial wine,
each, one fl. drachm.
Tincture of opium,
forty to fifty drops.

A tablespoonful occasionally, in catarrh. *Ellis.*

These mixtures are well known under the name of *Brown mixture.*

Syrup of Liquorice Root.

℞. Cut Russian liquorice root, four parts.
Water, eighteen parts.

Macerate over night, express, boil, strain, and evaporate to obtain after filtration seven parts. Add

Refined sugar,
Clarified honey, each,
twelve parts.

Dissolve. A pleasant addition to expectorant and demulcent mixtures. *Ph. Germ.*

Compound Syrup of Liquorice.

℞. Liquorice root, two ounces.
Maidenhair, one ounce.
Hyssop, half an ounce.
Water, two pints.

Infuse for twenty-four hours, boil to one-half, and add to strained decoction,

Honey, eight ounces.
Sugar, sixteen ounces.
Rose water, four fl. ounces.

Make a syrup. As a cough mixture in spoonful doses. *Spielmann.*

GOSSYPIUM.

Cotton

Is the down or hair attached to the seeds of *Gossypium herbaceum*, and other species of the genus. It consists of fine, white filaments, having neither odor nor taste, and is insoluble in water, alcohol, ether, the oils, etc., but is soluble in strong alkaline solutions.

Sex. Syst. Monadelph. polyand. *Nat. Syst.* Malvaceæ.

Linn. Sp. Pl. 845. Griffith, Med. Bot. 162.

It is principally used for the fabrication of cloth, but is also employed in medicine, as an application to recent burns and scalds, to erysipelas, and to parts affected with rheumatism. It should be applied in the form of thin sheets. The seeds furnish much oil.

Pyroxylon.
(Soluble Gun Cotton.)

℞ Cotton freed from impurities, half a troyounce.
Nitric acid, three troyounces and a half.
Sulphuric acid, four troyounces.

Mix the acids gradually, reduce the temperature to 90°, add the cotton, imbue it thoroughly with the acid, and macerate for fifteen hours; then wash it thoroughly, first with much cold water, afterwards with hot water, drain and dry.

If acids of the officinal strength cannot be obtained, use for the cotton

Nitric acid, sp. gr. 1.382 to 1.390, four troyounces.
Sulphuric acid, sp. gr. 1.833, ten troyounces,

and proceed as above. *U. S. Ph.* and *Ph. Germ.*

℞ Cotton, one ounce.
Sulphuric acid,
Nitric acid, each, five fl. ounces.

Mix the acids in a mortar, immerse the cotton, stir it well for three minutes, wash and dry as directed above. *Brit. Ph.*

℞ Cotton, one part.
Nitric acid, ten parts.
Sulphuric acid, twenty parts.

Mix the acids, cool to 86°, immerse the cotton, macerate for one or two days at a temperature below 95°, wash, and dry. *Paris Codex.*

Collodion.

℞ Pyroxylon, two hundred grains.
Stronger ether, twelve fl. ounces and a half.
Stronger alcohol, three fl. ounces and a half.

Dissolve the gun cotton in the mixed liquids. *U. S. Ph.*

℞ Pyroxylon, one ounce.
Ether, thirty-six fl. ounces.
Alcohol, twelve fl. ounces.

Dissolve. *Brit. Ph.*

Flexible Collodion.

℞ Collodion, a pint.
Canada turpentine, three hundred and twenty grains.
Castor oil, one hundred and sixty grains.

Mix. *U. S. Ph.*

℞ Collodion, six fl. ounces.
Canada balsam, one hundred and twenty grains.
Castor oil, one fl. drachm.

Mix. *Brit. Ph.*

℞ Gun cotton,
Castor oil, each, seven parts.
Stronger alcohol, twenty-two parts.
" ether, sixty-four parts.

Dissolve and mix. *Paris Codex.*

These preparations are much used in dressing wounds, the film left after the evaporation of the liquid uniting the edges of the wound and preserving it from contact with the air. The former preparation leaves a strongly contractile film, which is liable to crack.

GOSSYPII RADICIS CORTEX.

Bark of Cotton Root.

Obtained from *Gossypium herbaceum.* The root is considered to be an active emmenagogue, which property resides in the bark.

Decoction of Cotton Root.

℞ Cotton root, four ounces.
Water, one quart.

Boil down to a pint. Said to be as effectual as ergot in promoting uterine contraction. Dose, a wineglassful every twenty or thirty minutes. *Bouchelle.*

Fluid Extract of Cotton Root Bark.

℞ Cotton-root bark, in powder No. 80, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Mix the liquids, moisten the powder with five fl. ounces of the mixture, pack into a percolator, add the remaining liquid, and macerate four days. Then, with diluted alcohol displace twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, ten to thirty minims.

GRANATUM.

Pomegranate.

The *Punica granatum*, a small tree, a native of, and cultivated in warm climates, and much esteemed for its subacid fruit, affords two articles employed medicinally, the rind of the fruit, and the bark of the root.

Sex. Syst. Icosand. monog. *Nat. Syst.* Myrtaceæ.

Linn. Sp. Pl. 676. Griffith, Med. Bot. 294.

The rind, as found in the shops, is in fragments of a dry, hard, brittle consistence; of a yellowish or reddish-brown color, inodorous, and of an astringent, somewhat bitter taste. The bark of the root is in small pieces, of an ash-gray or yellowish color, externally, yellow within; brittle, with scarcely any odor, and an astringent, but not bitter taste. The rind is a good astringent, in doses of ten to thirty grains; and the bark of the root, an efficient vermifuge, especially in a fresh, or recently-dried state.

Decoction of Pomegranate Rind.

℞. Pomegranate rind, two ounces.
Distilled water, a pint and a half.

Boil to a pint, and strain. *Lond. Ph.*

Dose, one fl. ounce. As an astringent.

Gargle of Pomegranate Rind.

℞. Pomegranate rind, half an ounce.
Red roses, two drachms.
Boiling water, six fl. ounces.

Infuse, strain, and add

Clarified honey, one fl. ounce.
Alum, two drachms.

Used as a gargle, in inflammation of the fauces and throat. *Ellis.*

Injection of Pomegranate Rind.

℞. Pomegranate rind, one part.
Water, thirty-two parts.

Boil away one-half. *Béral.*

Decoction of Pomegranate Root.

℞. Bark of pomegranate root, two ounces.
Water, two pints.

Boil to a pint, and strain. Dose, one to two fluidounces. As a vermifuge, in cases of tænia. *Brit. Ph.*

Extract of Pomegranate Root.

℞. Bark of pomegranate root, at will.
Diluted alcohol, sufficient.

Macerate for a week, distil off the alcohol, and evaporate the residue to proper consistence. *Soubeiran.*

Electuary of Extract of Pomegranate Root.

℞. Extract of pomegranate root, six drachms.
Gum tragacanth, sufficient.
Lemon juice, two fl. ounces.
Linden water, three fl. ounces.

Mix. One-half to be taken, and half an hour afterwards the remainder. *Radius.*

Mixture of Extract of Pomegranate Root.

℞. Extract of pomegranate root, six drachms.
Lemon juice, Mint water, Linden water, each, two fl. ounces.

Mix. One-fourth to be taken every quarter of an hour. *Radius.*

Bolus of Pomegranate Root.

℞. Powdered bark of pomegranate root, one drachm.
Powdered red Peruvian bark, two drachms.
Copaiba, sufficient.

Mix, and form twelve boluses. One, morning and evening, in chronic mucous discharges. *Radius.*

℞. Powdered bark of pomegranate root, one drachm.
Assafetida, half a drachm.
Croton oil, four drops.
Syrup, sufficient.

Mix, and make fifteen boluses. Five a day, in the treatment of tænia. *Foy.*

GRATIOLA.

Hedge Hyssop.

Most of the species of this genus have active properties, but only one of them has been employed in medicine; the *G. officinalis* of Europe. A native species, the *G. aurea*, is possessed of identical properties, which, in both cases, depend on the presence of *gratiolin*.

Sex. Syst. Diand. monog. *Nat. Syst.* Scrophulariaceæ.

Linn. Sp. Pl. 24. Griffith, Med. Bot. 518.

The whole plant is used; it is almost inodorous, but has a bitter, nauseous taste. It is a drastic cathartic and emetic, with some diuretic properties. It has been stated that it forms the basis of the *Eau medicinale de Husson*. The dose of the powder is from ten to twenty grains.

Extract of Hedge Hyssop.

℞ Fresh hedge hyssop, twenty parts.

Bruise in a stone mortar, adding some water, express, evaporate to two parts, mix with equal weight of alcohol, filter, and evaporate. Dose, one to ten grains. *Ph. Germ.*

Compound Powder of Hedge Hyssop.

℞ Powdered hedge hyssop, two scruples.
Calomel, five grains.
Assafetida, half a drachm.
Oil of peppermint, three drops.

Mix, and divide into two powders. One to be taken every three hours, in tænia. *Augustin.*

Wine of Hedge Hyssop.

℞ Dried herb of hedge hyssop, one ounce.
Contused root of hedge hyssop, half an ounce.
White wine, sixteen fl. ounces.

Macerate for eight days, with a gentle heat, and strain. A tablespoonful at bedtime, drinking after it half a pint of beef-tea. If necessary, repeat next evening. *Perkins.*

Said to be the original recipe for the *Eau médicinale.*

GUAIACUM.

GUAIACUM.

The *Guaiacum officinale*, a large tree, a native of the West Indies and some parts of South America, affords two medicinal products; the wood and resin.

Sex. Syst. Decand. monog. *Nat. Syst.* Zygophyllaceæ.

Linn. Sp. Pl. 546. Griffith, Med. Bot. 203.

The wood (*lignum vitæ*) is very hard, of a greenish-brown color, of a bitterish, somewhat acrid taste, and of a faint smell, except when heated. The resin is of a greenish, or dark-olive color, of a feeble odor, and of an acrid taste. They both are stimulant and alterative, and have been much used in chronic rheumatism, gout, obstinate cutaneous affections, amenorrhœa, etc. The dose of the resin is from ten to thirty grains.

Wood Species.—Wood Tea.

℞ Rasped guaiacum, four parts.
Root of Ononis spinosa,
Burdock, each, two parts.
Liquorice root,
Sassafras root, each, one part.

Cut them separately, then mix. *Ph. Germ.*

Used as an alterative.

Compound Decoction of Guaiacum Wood.

℞ Guaiacum shavings, three ounces.
Raisins, two ounces.
Sassafras root, rasped,
Liquorice root, bruised,
each, one ounce.
Water, eight pints.

Boil the guaiacum and raisins in the water, down to five pints, adding the other ingredients, towards the close of the operation. Strain. *Ed. Ph.*

This is the old *decoction of the woods.*

From one to two pints may be taken, during the day, in divided doses, as an alterative in chronic rheumatism and cutaneous dieases.

℞ Rasped guaiacum wood, two drachms.
Water, sufficient

to obtain one pint of strained decoction. After an hour's boiling, add

Wine of colchicum seed, two drachms.

A wineglassful every two hours, in chronic pains of the joints. *Radius.*

Extract of Guaiacum Wood.

℞ Powdered guaiacum wood, at will.

Exhaust with boiling water, by means of a displacement apparatus, and evaporate. *Van Mons.*

Oil of Guaiacum Wood.

℞ Guaiacum wood, at will.

Distil on a sand-bath, separate the oil, and rectify it. Dose, four to five drops, in gonorrhœa; also as a friction in rheumatism. *Taddei.*

Compound Oil of Guaiacum.

℞ Oil of guaiacum, three ounces.
Balsam of Peru, one ounce.
Ammoniated alcohol, half an ounce.

Mix. In caries of the teeth, and as a dressing to malignant ulcers. *Swediaur.*

Compound Powder of Guaiacum.

℞ Powdered resin of guaiacum, two drachms.
Cream of tartar, half an ounce.
Sugar, six drachms.

Mix. Three teaspoonfuls a day, in gout. *Phœbus.*

℞ Powdered resin of guaiacum,
" nitrate of potassium, each, one drachm.
Powdered ipecacuanha, three grains.
" opium, two grains.

Mix, and divide into six powders. One, every three hours, as a stimulating diaphoretic in acute rheumatism, after reduction of inflammation. *Ellis.*

Pills of Guaiacum and Turpentine.

℞ Powdered resin of guaiacum, one drachm.
Venice turpentine, sufficient.

Mix, and make fifteen pills. One, three times a day, in gleet and leucorrhœa. *Ellis.*

Pills of Guaiacum, Aloes, etc.

℞ Powdered guaiacum resin, one drachm.
Powdered aloes, thirty-six grains.
" rhubarb, two drachms.
Canada balsam, sufficient.

Form mass, and divide into forty-eight pills. One, every three hours, as a stimulating cathartic. *Ellis.*

Pills of Guaiacum, Antimony, etc.

℞ Powdered resin of guaiacum,
Golden sulphuret of antimony, each, half a drachm.
Calomel, ten grains.
Extract of dandelion, sufficient.

Form mass, and divide into three-grain pills. Three to four, three times a day, in painful affections of the joints. *Hildebrand.*

Pills of Guaiacum, Sulphur, etc.

℞ Powdered resin of guaiacum, half an ounce.
Washed sulphur, one ounce.
Crude antimony, one drachm and a half.
Extract of blessed thistle, sufficient.

Form mass, and make pills of two grains. Ten, three times a day, in gout, rheumatism, and obstinate cutaneous affections. *Quarin.*

Mixture with Guaiacum, etc.

℞ Powdered resin of guaiacum, two drachms.
Powdered nitrate of potassium, one drachm and a half.
Powdered gum Arabic, one drachm.
Powdered tartar emetic, one grain.
" liquorice, one scruple.
Distilled or mint water, eight fl. ounces.

Mix. A tablespoonful, three or four times a day, in rheumatism, etc. *Ellis.*

Guaiacum Mixture.

℞ Resin of guaiacum,
Sugar, each, half an ounce.
Powdered gum Arabic, two drachms.
Cinnamon water, one pint.

Rub the resin with the sugar and gum Arabic, and gradually add the cinnamon water while rubbing. *Brit. Ph.*

One to three tablespoonfuls, two or three times a day.

Mixture of Guaiacum and Bittersweet.

℞ Powdered resin of guaiacum, two drachms.
Powdered gum Arabic, three drachms.
Extract of bittersweet, three drachms.
Syrup of mallow, one fl. ounce.
Distilled water, seven fl. ounces.

Mix. A tablespoonful every three hours, in chronic rheumatism. *Berends.*

Tincture of Guaiacum.

Guaiacum resin, in powder, No. 40, six troyounces.
Alcohol, sufficient.

Mix guaiacum with an equal bulk of sand, pack in a percolator, cover with a layer of sand, and obtain by displacement two pints. *U. S. Ph.*

℞ Resin of guaiacum, bruised, one part.
Alcohol, five parts.

Digest for eight days, and filter. *Paris Codex* and *Ph. Germ.*

Dose, one to three fl. drachms, three or four times a day, in gout and chronic rheumatism; to be given in milk or mucilage.

Dewees's Tincture.

R. Powdered resin of guaiacum, four ounces.
Carbonate of sodium or potassium, one drachm and a half.
Powdered pimento, one ounce.
Diluted alcohol, one pint.

Digest for a few days. Add volatile spirit of ammonia, if required, in proportion of one or two drachms to each four ounces of tincture. Highly praised in idiopathic amenorrhœa, in doses of a teaspoonful, three times a day, in milk or wine.

Dewees.

Tincture of Guaiacum and Corrosive Sublimate.

R. Resin of guaiacum, Canada balsam, each, one troyounce.
Corrosive sublimate, twenty grains.
Oil of sassafras, two drachms.
Alcohol, half a pint.

Digest for several days, and filter. Dose, ten to twenty minims. Known as tincture anticrid. *Maryland Coll. Ph.*

Ammoniated Tincture of Guaiacum.

R. Powdered resin of guaiacum, six troyounces.
Aromatic spirit of ammonia, two pints.

Macerate for seven days, and filter.

U. S. Ph.

The tincture of *Brit. Ph.* is nearly identical with this.

R. Powdered resin of guaiacum, three parts.
Alcohol, ten parts.
Water of ammonia, five parts.

Macerate for a week, and filter. *Ph. Germ.*

Dose, one to two fl. drachms, two or three times a day, in chronic rheumatism.

Ammoniated Tincture of Guaiacum and Copaiba.

R. Ammoniated tincture of guaiacum, one fl. ounce.
Copaiba, half fl. ounce.

Mix. A teaspoonful two or three times a day, in amenorrhœa with general debility.

Ellis.

Ammoniated Tincture of Guaiacum and Paregoric.

R. Ammoniated tincture of guaiacum, one fl. ounce.
Camphorated tincture of opium, one fl. ounce.

Mix. Two teaspoonfuls every two hours, in misplaced and retrocedent gout. *Ellis.*

Odontalgic Mixture of Guaiacum.

R. Tincture of guaiacum, six fl. drachms.
Oil of valerian, one fl. ounce.
Syrup of scurvy grass,
Compound tincture of benzoin, each, two fl. drachms.
Tincture of opium, one fl. drachm.

Mix. A teaspoonful mixed with hot water, to be held in the mouth, in toothache.

Carus.

Mixture of Tincture of Guaiacum and Henbane.

R. Tincture of guaiacum, two fl. drachms.
" henbane, one fl. drachm.

Mix. Twenty to thirty drops, morning and evening, in spasm of the stomach and neuralgia. *Radius.*

GUTTA-PERCHA.

GUTTA-PERCHA.

It is the hardened milk juice of *Isonandra gutta*, a magnificent tree of the Malayan archipelago, and belonging to the order of *Sapotaceæ*. Gutta-percha is somewhat related to caoutchouc and contains several resins, an acid, and casein; it is hard at the ordinary temperature, but softens and becomes plastic and somewhat elastic when heated; its best solvents are chloroform and oil of turpentine. It is mostly employed in surgery, in the formation of splints, and for bougies and pessaries.

Solution of Gutta-percha.

R. Gutta-percha in thin slices, one troyounce and a half.
Chloroform, seventeen troyounces.
Carbonate of lead, in powder, two troyounces.

Dissolve the gutta-percha, by agitation, in twelve troyounces of chloroform, add the carbonate previously mixed with the remaining chloroform, agitate occasionally for half an hour, set aside for ten days, and decant the limpid, colorless or straw-colored solution. *U. S. Ph.*

It leaves, on evaporation, a tenacious film, and is used for similar purposes as collodion.

H.

HÆMATOXYLON.

Logwood.

This is the heart wood of *Hæmatoxylon campechianum*, a middle-sized tree, a native of Campeachy, and naturalized in several of the West India Islands. It is principally used for dyeing purposes, but is also employed in medicine.

Sex. Syst. Decand. monog. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 549. Griffith, Med. Bot. 252.

It comes in logs of a dark-yellowish color externally, and deep red internally; for medical use, it is chipped or rasped. It has a feeble but peculiar odor, and a sweetish, somewhat astringent taste. It is used as a mild astringent in chronic diseases and relaxed conditions of the bowels.

Infusion of Logwood.

℞. Rasped logwood, half an ounce.
Boiling water, one pint.

Infuse for two hours, and strain. A tablespoonful every two or three hours, in cholera and diarrhœa of children. *Ellis.*

Decoction of Logwood.

℞. Rasped logwood, one troyounce.
Water, two pints.

Boil down to a pint, and strain. *U. S. Ph.*

℞. Logwood in chips, one ounce.
Cinnamon in coarse powder, sixty grains.
Distilled water, one pint (imper.).

Boil for ten minutes, adding cinnamon towards the end, strain, and add water upon strainer to obtain one pint. *Brit. Ph.*

A good astringent in diarrhœa, especially in children. Dose for an adult, two fl. ounces; for a child about two years of age, two or three fl. drachms, several times a day.

Extract of Logwood.

℞. Rasped logwood, one pound.
Water, one gallon.

Boil to four pints, strain while hot, then evaporate to proper consistence. *U. S. Ph.* and *Brit. Ph.*

Dose, from ten to thirty grains.

Electuary of Extract of Logwood.

℞. Extract of logwood,
" liquorice,
each, two drachms.
" Peruvian bark, three drachms.
" cascarilla, one drachm.
Mucilage of quince-seed, sufficient.

Mix. A teaspoonful three times a day, in chronic diarrhœa, etc. *Radius.*

Mixture of Extract of Logwood.

℞. Extract of logwood, three drachms.
Boiling water, seven fl. ounces.

Dissolve, strain, and add

Tincture of cinnamon, six fl. drachms.
" catechu, two fl. drachms.

Mix. Dose, one fl. ounce every six hours. *Beasley.*

℞. Extract of logwood, three drachms.
Tincture of catechu, two fl. drachms.
Water, seven fl. ounces.

Mix. Two spoonfuls every three or four hours. In diarrhœa and dysentery. *Ellis.*

℞. Extract of logwood, three drachms.
Spirit of cinnamon, one fl. ounce and a half.
Water, seven fl. ounces.
Tincture of kino, two fl. drachms.

Mix. In the same doses, and in the same diseases, as the last. *Swediaur.*

HAMAMELIS.

Witch Hazel.

The *Hamamelis Virginica* is a large native shrub, found along streams in most parts of the country, presenting several varieties.

Sex. Syst. Tetrand. digyn. *Nat. Syst.* Hamameliaceæ.

Pursh, Fl. Am. i. 116. Griffith, Med. Bot. 350.

The parts used are the bark and leaves. These are bitter and astringent, leaving a sensation of sweetness. They are considered sedative, astringent, and tonic, and useful in bowel affections and hemorrhages, and externally as an application to tumors, painful hemorrhoids, etc. They are used in infusion, decoction, or poultice.

HEDEOMA.

Pennyroyal.

Hedeoma pulegioides is a small, annual, aromatic plant, abundant in most parts of the United States, growing in dry, sterile situations.

Sex. Syst. Diand. monog. *Nat. Syst.* Lamiaceæ.

Persoon, Synop. ii. 131. Griffith, Med. Bot. 508.

The whole plant is used. It has a warm, pungent taste, and a powerful aromatic odor. It is a stimulating aromatic, used to obviate nausea, and relieve flatulence, and also, in domestic practice, as an emmenagogue.

Infusion of Pennyroyal.

℞ Pennyroyal, two drachms.
Boiling water, sufficient

to afford six ounces of strained infusion. To be taken freely, in a warm state, at bedtime, the feet having been previously bathed in hot water, in amenorrhœa.

Oil of Pennyroyal.

℞ Pennyroyal, at will.
Water, sufficient

Distil, and collect the oil. Dose, two to ten drops, in flatulent colic and nausea.

HELENIUM.

Sneezewort.

Sneezewort, or *Helenium autumnale*, is an indigenous plant, found in wet situations, in most parts of the United States, flowering in the autumn.

Sex. Syst. Syngen. super. *Nat. Syst.* Asteraceæ.

Torrey & Gray, Fl. ii. 384. Griffith, Med. Bot. 398.

This plant is almost inodorous, but has a bitter, somewhat pungent, acrid taste. It is tonic, diaphoretic, and powerfully errhine; this latter property is most developed in the flowers, and especially the central florets; these, when powdered, may be used in those cases to which errhines are applicable. It is said that the plant is poisonous to horses.

HELIANTHEMUM.

Frostweed.

The *Helianthemum Canadense* is a native perennial plant, growing in many parts of the United States, in dry, sandy soils.

Sex. Syst. Polyand. monog. *Nat. Syst.* Cistaceæ.

Mich. Fl. i. 308. Darlington, Fl. Cest. 313.

It has little or no odor, but an astringent, somewhat aromatic, bitterish taste. It is tonic and astringent, and has proved beneficial in scrofula.

HELLEBORUS.

Black Hellebore.

Several species of *Helleborus* are possessed of almost identical medical properties, but the only one used in this country is *H. niger*, so called on account of the color of its roots. It is a native of mountain woods, in many parts of Europe, and is cultivated as an ornamental flowering plant. *H. viridis* has similar properties and is preferred by European authorities.

Sex. Syst. Polyand. polyg. *Nat. Syst.* Ranunculaceæ.

Linn. Sp. Pl. 783. Griffith, Med. Bot. 85.

The parts used are the rhizome with the small fibres or roots, which are about as thick as straw, black, and have a somewhat nauseous odor and a bitter, unpleasant, acrid taste. Black hellebore is a drastic hydragogue purgative; having, also, considerable emmenagogue powers. The dose in powder is from ten to twenty grains, as a purge; two or three grains as an alterative.

Compound Black Hellebore Pills.

℞ Powdered black hellebore, fifteen grains.
Calomel, five grains.
Powdered ipecacuanha, three grains.
Syrup of ginger, sufficient.

Mix, and make four pills. Two to be taken every four hours, in dropsy, till full purgation is caused. *Ainslie.*

Extract of Black Hellebore.

℞ Black hellebore, in powder, No. 60, twelve troyounces.
Alcohol, a pint.
Diluted alcohol, sufficient.

Displace first with alcohol, then with diluted alcohol, until three pints of tincture have been obtained. Evaporate the first pint spontaneously to three fl. ounces, and the remainder at or below 160° to a syrupy consistence; mix the two portions and evaporate at 120° to the proper consistence. *U. S. Ph.*

Dose, ten to fifteen grains, as a drastic purge.

Vino-Alcoholic Extract of Black Hellebore.

℞. Powdered black hellebore, two pounds.
Carbonate of potassium, half a pound.
Diluted alcohol, eight pints.

Macerate for twelve hours, express, and pour on the residuum,

White wine, eight pints.

Digest for twenty-four hours, express, mix the two tinctures, and evaporate. *Cottereau.*

Dose, ten to fifteen grains.

Compound Pills of Extract of Black Hellebore.

℞. Vino-alcoholic extract of black hellebore,
Extract of myrrh, each, two ounces.
Powder of blessed thistle, one ounce.

Beat together, and form pills of one grain. Ten to twenty a day, in amenorrhœa, dropsy, etc. *Radius.*

These pills are much used in Europe, under the name of *Bacher's pills.*

℞. Extract of black hellebore, Assafetida, Ammoniac, Soap, each, two drachms.
Rhubarb, sufficient.

Beat into mass, and form pills of two grains. Dose, ten to twelve, morning and evening, as a purgative and emmenagogue. *Augustin.*

Tincture of Black Hellebore.

℞. Black hellebore, in powder, No. 50, four troyounces.
Diluted alcohol, sufficient.

Obtain by displacement two pints. *U. S. Ph.*

Used as an emmenagogue, in doses of thirty drops to a fl. drachm, night and morning, watching its action.

Mixture with Tincture of Black Hellebore.

℞. Tincture of black hellebore, half a fl. ounce.
Tincture of myrrh, one fl. ounce.
" Spanish flies, two fl. drachms.

Mix.

Thirty drops, three times a day, in sugar and water, as an emmenagogue.

Compound Wine of Black Hellebore.

℞. Bruised black hellebore, one ounce.
" wormwood, a handful.
White wine, four pints.

Macerate for three days, express, and filter. Two to three spoonfuls in the morning, fasting. In dropsy. *Brunner.*

Ointment of Black Hellebore.

℞. Powdered black hellebore, one to two drachms.
Lard, one ounce.

Mix. As an application to obstinate herpetic eruptions. *Soubeiran.*

HEMIDESMUS.

Indian Sarsaparilla.

The *H. indicus* is a native of many parts of India. It is a climbing plant, and has been long used in the East as an efficient medicinal agent; but was almost unknown in Europe, or this country, until about 1819.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Asclepiadaceæ.

Brown, Hort. Kev. ii. 75. Griffith, Med. Bot. 453.

The root, which is the part used, is long, tortuous, rugose, with longitudinal furrows; it is brownish externally, and has a peculiar and somewhat aromatic odor, and a bitterish taste. It has the properties of sarsaparilla; and like it, is given in infusion, decoction, etc. These are made in the same manner as those of sarsaparilla, and given in the same doses, and in similar diseases.

Syrup of Hemidesmus.

℞. Indian sarsaparilla, four ounces.
Boiling water, one pint.
Sugar, twenty-eight ounces.

Infuse the root in the water for four hours, strain, decant, and dissolve the sugar. The

product should weigh forty-two ounces, and have the sp. gr. 1.335.

Dose, one fl. drachm. *Brit. Ph.*

Mixture of Hemidesmus.

℞. Indian sarsaparilla, ten drachms.
Extract of liquorice, ten grains.
Distilled water, ten fl. ounces.

Digest for twelve hours, strain, heat to 180°, and again strain. One-third, three times a day. *Beasley.*

℞. Syrup of hemidesmus, five ounces.
Solution of potassa, half to one fl. drachm.
Orange-flower water, one fl. ounce.

Mix. One fl. ounce, thrice a day, in barley-water. For gonorrhœa. *Bellinarye.*

Infusion of Hemidesmus.

℞. Indian sarsaparilla, two ounces.
Lime water, one pint.

Infuse in a close vessel for twelve hours. Dose, a wineglassful. *Ashburner.*

Decoction of Hemidesmus.

℞. Indian sarsaparilla, two ounces.
Water, one pint and a half.

Boil down to one pint. To be taken during the day, in wineglassful doses. *Pereira.*

HEPATICA.

Liverwort.

The *H. triloba* is a small native plant, found in most parts of the United States, and also in the northern regions of Europe and Asia, having three-lobed leaves, and presenting two marked varieties: one with the lobes of the leaves rounded, the other with them acute.

Sex. Syst. Polyand. polyg. *Nat. Syst.* Ranunculaceæ.

Torrey & Gray, Fl. i. 14. Griffith, Med. Bot. 81.

The whole herb is used. It is inodorous, and has a mucilaginous, slightly astringent and bitterish taste. It is a very mild, demulcent tonic and astringent, and was much employed at one time as a deobstruent in herpetic affections, and also as a remedy in diseases of the lungs. Its powers, however, are very slight. It is given in infusion; to be taken freely.

HERACLEUM.

Masterwort.

This is the root of *Heracleum lanatum*, a very large, perennial plant, found in many parts of the United States, in waste places.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Torrey & Gray, Fl. i. 632. Griffith, Med. Bot. 335.

The part used is the root; this resembles the parsnip in appearance, but has a rank, unpleasant odor, and a pungent, acrid taste. It is said to be diuretic, expectorant, and antispasmodic, and has proved useful in epilepsy, attended with a disordered condition of the digestive organs, in doses of two or three drachms daily. It is also used in strong decoction, in dyspepsia with flatulence and cardialgia.

HEUCHERA

Alum Root.

Most of the species of *Heuchera* are possessed of identical properties, but the only one recognized by the U. S. Pharmacopœia is *H. Americana*. This is an indigenous plant, growing in shady, rocky situations, in most parts of the country.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Saxifrageæ.

Torrey & Gray, Fl. i. 578. Griffith, Med. Bot. 313.

The root is rugose, irregular, reddish, almost inodorous, and of a strong, styptic taste. It is a powerful astringent, and may be employed in such cases as require medicines of this class.

HIPPOCASTANUM.

Horse Chestnut.

The horse chestnut, or *Æsculus hippocastanum*, is a beautiful and lofty tree, a native of the central parts of Asia, but extensively cultivated in Europe, and the United States.

Sex. Syst. Heptand. monog. *Nat. Syst.* Sapindaceæ.

Linn. Sp. Pl. 488. Griffith, Med. Bot. 213.

The part used is the bark; this is light, brittle, of a brownish-red externally, of a yellow-brown within. It has a somewhat aromatic odor, and an astringent, bitter taste. It is a somewhat active astringent, and has been much praised in intermittent fevers. The dose of the powder is two to four scruples, every three hours, till an ounce and a half is taken.

Compound Powder of Horse Chestnut.

℞. Powdered horse chestnut bark,
" willow bark,
each, half an ounce.

Powdered gentian, } each, two
" calamus, } drachms.
" cloves, }

Mix. *Hufeland.*

Decoction of Horse Chestnut Bark.

℞. Horse chestnut bark, one ounce and a half.
Water, thirty fl. ounces.

Boil down to ten ounces, adding towards close of operation,

Liquorice root, one drachm.

Strain. A cupful every two hours. *Niemann.*

Compound Decoction of Horse Chestnut.

℞. Horse chestnut bark,
Willow bark, each, half an ounce.
Calamus,
Root of water avens,
each, two drachms.
Water, sixteen fl. ounces.

Boil down to one-half. *Spielmann.*

℞. Horse chestnut bark, one ounce and a half.
Water, eighteen fl. ounces.

Boil down to one-half, strain, and add

Ether, one to two drachms.
Syrup of orange-peel, one ounce.

Mix. To be used during the apyrexia. *Phœbus.*

Extract of Horse Chestnut.

℞. Horse chestnut bark, at will.
Water, sufficient.

Exhaust the bark in a displacement apparatus, and evaporate to proper consistence. Dose, five to fifteen grains. *Van Mons.*

HORDEUM.

Barley.

There are several species of *Hordeum*, but those usually cultivated in this country are *H. vulgare* and *H. distichon*, the latter of which is recognized as officinal. The native country of these is unknown, but they have been cultivated from the earliest ages.

Sex. Syst. Triand. digyn. *Nat. Syst.* Graminaceæ.

Linn. Sp. Pl. 125. Griffith, Med. Bot. 664.

The seeds are used in various forms; in that of meal, malt, pearl barley, etc. They are one of the mildest and least irritating of the cerealia, and are much used in decoction, etc., as a nutritive and demulcent drink.

Prepared Barley Meal.

℞. Barley meal, at will.

Tie it in a linen or cotton cloth, and boil it for twelve hours, then let it cool, remove the outer crust, and pulverize the centre. A useful diet, boiled with milk, in bowel diseases. *Hanover Ph.*

℞. Barley meal, twelve ounces.
Sugar, four ounces.
Powdered cinnamon, half a drachm.

Mix, and place in a proper vessel, covering with wheat dough, put in an oven and bake, remove, cool, and pulverize. Half an ounce to two ounces, cooked with water or milk, form an excellent diet, in debilitated conditions of the system. *Taddei.*

Barley Sugar.

℞. Decoction of barley, a pint and a half.
Sugar, two pounds.

Boil to proper consistence, and form lozenges or rolls. As a demulcent in catarrh. *Giordano.*

Decoction of Barley.

℞. Pearl barley, two ounces.
Water, sufficient.

Wash the barley in cold water, drain, pour on it half a pint of the water, boil for a short time, drain off this water, add four pints of boiling water, boil down to two pints, and strain. *U. S. Ph.*

The process of *Brit. Ph.* is nearly the same.

As a nutritive and demulcent drink in febrile and inflammatory diseases.

Compound Decoction of Barley.

℞. Decoction of barley, two pints.
Sliced figs, two ounces and a half.
Bruised liquorice root, five drachms.
Stoned raisins, two ounces and a half.
Water, one pint.

Mix, and boil down to two pints, and strain. *Lond. Ph.*

A demulcent, nutritive, and somewhat laxative drink.

Barley Water with Nitrate of Potassium.

℞. Decoction of barley, one pint.
Nitrate of potassium, two drachms.
Lemon juice, one fl. ounce.

Mix. To be used warm as a diaphoretic drink. *Ellis.*

HUMULUS.

Hops.

By this is meant the strobiles of the *Humulus lupulus*, a climbing vine, a native of Europe, and probably of this country. It is extensively cultivated for its aments or strobiles, which are largely employed in the preparation of malt liquors, and also in medicine.

Sex. Syst. Dicec. pentand. *Nat. Syst.* Cannabinaceæ.

Linn. Sp. Pl. 1457. Griffith, Med. Bot. 574.

Hops consist of thin, somewhat translucent, leaf-like scales, of a greenish-yellow color, having, near their base, two small, round, dark seeds. Their odor is strong and peculiar, somewhat narcotic, and fragrant; their taste is bitter, aromatic, and somewhat astringent. These properties depend on a peculiar secretion, called Lupuline. Hops are tonic, and slightly narcotic, and are used in various conditions of the system. The dose, in substance, is from half a drachm to a drachm, but it is seldom administered in this form.

Infusion of Hops.

℞. Hops, half a troyounce.
Boiling water, one pint.

Macerate for two hours in a covered vessel, and strain. *U. S. Ph.*

Brit. Ph. uses half an ounce of hops to ten ounces of water.

Dose, one or two fl. ounces, in dyspepsia, nervous tremors, etc.

Extract of Hops.

℞. Hops, one pound.
Alcohol, thirty fl. ounces.
Distilled water, ten pounds.

Macerate the hops in the spirit for a week, press out, filter and distil, leaving a soft extract. Boil the residual hop with the water for an hour, press, strain, and evaporate to a soft extract. Mix the two extracts and evaporate at or below 140° to the proper consistence. Dose, five to fifteen grains. *Brit. Ph.*

Hop Mixture.

℞. Extract of hops, two drachms.
Water of hops, seven fl. ounces.
Tincture of hops, half fl. ounce.
Syrup of orange-peel, one fl. ounce.

Mix. A tablespoonful every hour, as a tonic and stomachic. *Niemann.*

Tincture of Hops.

℞. Hops, in powder,
No. 40, five troyounces.
Diluted alcohol, sufficient.

Obtain by displacement two pints, *U. S. Ph.*

The tincture of *Brit. Ph.* is nearly of the same strength.

Dose, from one to three fl. drachms, as a tonic, and narcotic, especially in the wakefulness and tremors of drunkards.

Alkaline Tincture of Hops.

℞. Hops,
Centaury, each, one ounce.
Peel of bitter orange, two drachms.
Carbonate of potassium, one scruple.
Diluted alcohol, eighteen fl. ounces.

Macerate for eight days, express, and filter. Dose, half an ounce to an ounce.

Fluid Extract of Hops.

℞. Hops in powder, sixteen troyounces.
Diluted alcohol, sufficient.

Exhaust by maceration and displacement, reserve the first fourteen fluidounces, evaporate the remainder to two fluidounces, and mix with reserved portion. Dose, twenty to sixty minims. *W. Procter.*

Elixir of Hops.

℞. Fluid extract of hops,
Rose water, each, one pint.
Alcohol, twenty fl. ounces.
Syrup, five fl. ounces.
Sugar, eighteen troyounces.
Tincture of recent orange-peel,
Essence of celery, each, one ounce.
Oil of anise, four drops.
Oil of cinnamon, six drops.

Dissolve and mix. Dose, a tablespoonful. *Maryland Coll. Ph.*

Cataplasm of Hops.

℞. Hops, one pound.
Flaxseed meal, two ounces.
Beer, sufficient.

Mix. As an application to bruises and indolent tumors. *Radius.*

Ointment of Hops.

℞. Hops, two ounces.
Lard, ten ounces.

Digest for some hours, by a gentle heat, express, and strain; recommended to relieve the pain of cancerous sores. *Swediaur.*

HYDRARGYRUM.

Mercury.

Mercury is a brilliant, silver-white fluid metal, having neither taste nor smell. It becomes solid at —39° F., and boils at 665°. Mercury, in masses, does not appear to act on the system, but in a state of great division it produces marked and peculiar effects. It acts as an alterative, deobstruent, sialagogue, etc. It has been employed in almost all diseases, in some of its preparations, each of which has some peculiarity of action.

Purified Mercury.

℞. Mercury, one hundred parts.
Nitric acid,
Distilled water, each, five parts.

Digest in a glass vessel for three days, remove the acid liquor, wash mercury with water, and dry. *Ph. Germ.*

Muriatic acid has been recommended for the same purpose.

Mercury with Antimony.

℞. Mercury, four parts.
Crude antimony, three parts.
Sulphur, two parts.

Triturate together till the mercury disappears. As a diaphoretic and alterative. Dose, one to four grains. *Giardano.*

℞. Mercury, one ounce.
Washed flowers of sulphur, one ounce.
Powdered sulphuret of antimony, three ounces.

Rub them in a warm stone mortar, with a little water or sulphuret of ammonium, until the globules of mercury disappear. *Codex Hamb.* 1845.

This preparation is much used in France and Germany, under the name of *antimonial ethiops.*

Compound Mercurial Powder.

℞. Powdered resin of guaiacum, one drachm.
Mercury with antimony,
Magnesia, each, one scruple.

Mix. To be taken in two days, in divided doses, in chronic exanthematous affections. *Hufeland.*

℞. Mercury with antimony, twenty-four grains.
Carbonate of sodium, eighteen grains.
Powdered sassafras,
Sugar, each, one drachm.

Mix, and divide into six powders. One to be taken daily, in chronic diseases of the skin. *Sundelin.*

Pills of Mercury and Antimony.

℞. Mercury, one drachm.
Crude antimony, four scruples.
Flowers of sulphur, two scruples.
Extract of opium, one scruple.

Triturate till mercury disappears, with

Syrup of mallow, sufficient.

Divide into one hundred and fifty pills. Dose, five or six a day. Highly spoken of by Huxham, in venereal pains, scrofula, etc. *Baldinger.*

℞. Mercury with antimony, one drachm.
Extract of hemlock, two drachms.
Soap, half an ounce.
Galbanum,
Extract of ox gall, each, half a drachm.

Beat into mass, and form pills of two grains. Dose, eight to ten, three times a day, in scirrhus of the pylorus. *Radius.*

Mercury with Chalk.

℞. Mercury, three troyounces.
Prepared chalk, five troyounces.

Rub together till all the globules disappear. *U. S. Ph.*

Brit. Ph. uses one ounce of mercury to two ounces of prepared chalk.

A mild preparation, well suited as an alterative in complaints of children. Dose, five grains to half a drachm, twice a day, for adults; two or three grains for a child.

Mercury and Chalk.

℞. Mercury, three ounces.
Resin, six drachms.
Prepared chalk, five ounces.
Alcohol, sufficient.

Make a paste with the resin and a small quantity of the alcohol; then add the mercury, which may be extinguished in a short time; add the chalk and alcohol gradually, so as to keep up the pasty consistence; then add sufficient alcohol to dissolve out the resin, and wash the powder on a filter, and dry.

Dr. Stewart, modified by P. Lehman.

Mercury and Chalk with Ipecacuanha.

℞. Mercury with chalk, one scruple.
Powdered ipecacuanha, ten grains.

Mix, and divide into six powders. One, night and morning, in syrup. In dyspepsia with biliary derangement. *Paris.*

Mercury and Chalk Liniment.

℞. Mercury,
Prepared chalk,
each, half an ounce.

Triturate till globules disappear, and add

Honey of roses, two ounces.

Mix well. As a dressing to venereal ulcers. *Bories.*

Mercury and Gum.

℞. Mercury, one part.
Gum Arabic, two parts.

Make a mucilage with a quarter of the gum, rub the mercury with it till extinguished, add the remainder of the gum with as much water as is required, mix well, dry by a gentle heat, and pulverize.

Paris Codex.

Pills of Mercury and Gum with Hemlock.

℞. Mercury, one part.
Gum Arabic, two parts.
Syrup of violets, four parts.

Triturate till the mercury is extinguished, and add

Extract of hemlock, one part.
Powdered liquorice, sufficient.

Mix well, and form pills of two grains. Two to four twice a day, as an alterative. *Plenck.*

Mercurial Mucilage of Gum Arabic.

℞. Mercury, one part.
Gum Arabic, two parts.
Water, sufficient.

Triturate till the mercury is extinguished. This is a good preparation of mercury; it is given in the dose of two teaspoonfuls, in syrup or mucilage, morning and night, as an alterative or anthelmintic. *Béral.*

Mercurial Gargle.

℞. Mercury, half a drachm.
Gum Arabic, three drachms.
Syrup of poppies, half an ounce.
Calomel, six grains.

Triturate till mercury is extinguished, and add

Decoction of clematis (Virgin's bower), twenty-six fl. ounces.
Honey of roses, one ounce.
Essence of myrrh, one drachm.

Mix. As a gargle in syphilitic angina, and ozæna. *Plenck.*

Mercurial Lotion.

℞. Mercury, one drachm.
Gum Arabic, four drachms.
Syrup of poppies, sufficient.

Rub together till globules disappear, and add gradually, constantly rubbing,

Boiling milk, eight fl. ounces.

As a lotion in gonorrhœal ophthalmia, ulcers on the penis, and also as a gargle in venereal sore throat. *Plenck.*

Mercury with Magnesia.

℞. Purified mercury,
Manna, each, two parts.
Carbonate of magnesium, one part.

Rub the mercury with the manna, adding a little water, till globules disappear; add one-eighth part of the magnesia, still rubbing, and when mixed, sixteen parts of hot water, and agitate; let sediment subside; then decant, and repeat washing till all the manna is removed; mix the residue with remainder of magnesia, and dry.

Dub. Ph. 1826.

A mild mercurial, well suited as an alterative in children, especially when there is constipation. Dose, three to four grains.

Blue Pills.

℞ Mercury, three hundred and eighty-four grains.
Confection of roses, five hundred and seventy-six grains.
Powdered liquorice root, one hundred and ninety-two grains.

Rub the mercury with the confection till all the globules disappear, add the liquorice root, and beat into mass. Divide into three hundred and eighty-four pills. *U. S. Ph.*

Brit. Ph. uses the same proportions, but does not divide into pills.

One of the mildest and best of the mercurial preparations. From five to fifteen grains as a purgative; one pill every night, or every other night, as an alterative; one pill two or three times a day, as a laxative. Each pill contains one grain of mercury.

Blue Pill with Jalap.

℞ Blue pill, } each, fifteen grains.
Powdered jalap, }
" aloes, }

Mix, and form twelve pills; three at night, as a purgative. *Ellis.*

Blue Pill with Rhubarb.

℞ Blue pill, nine grains.
Powdered rhubarb,
Bicarbonate of sodium, each, twelve grains.
Aromatic syrup of rhubarb, sufficient.

Beat into mass, and form twelve pills. One, twice or thrice a day, as an alterative, in hepatic derangement. *Hartshorne.*

℞ Blue pill, eighteen grains.
Powdered rhubarb, twelve grains.
Bicarbonate of sodium,
Soap, each, six grains.
Socotrine aloes, four grains.
Nutmeg, three grains.

Mix, and make twelve pills. *J. Wright's pills.* *Maryland Coll. Ph.*

Blue Pill with Colocynth.

℞ Blue pill,
Compound extract of colocynth, each, five grains.
Oil of caraway, two drops.

Mix, and make two pills. A very active purgative. *Ellis.*

℞ Compound extract of colocynth, } each,
Socotrine aloes, } twenty
Blue pill, } grains.
Soap, }
Scammony, ten grains.

Mix, and form twenty pills. Known as *Wallace's pills.* *Maryland Coll. Ph.*

Triplex Pills.

℞ Socotrine aloes, } each, one
Scammony, } troyounce.
Blue pill, }
Croton oil, twenty minims.
Oil of caraway, ninety minims.
Elixir proprietatis, sufficient.

Make four hundred pills. Dose, as a laxative, one at bedtime. *J. W. Francis.*

Blue Pill and Quinia.

℞ Blue pill, } each,
Sulphate of quinia, } twelve
Powdered aloes, } grains.
Aromatic syrup of rhubarb, sufficient.

Beat into mass, and form twelve pills. One, twice to four times a day, as a tonic alterative, in deranged conditions of the liver consequent to fevers. *Ellis.*

Compound Mercurial Pills.

℞ Blue pill, five grains.
Powdered ipecacuanha, two grains.
Camphor, one grain and a half.
Syrup of ginger, sufficient.

Mix, and make two pills. One, morning and evening, in hepatitis, till mouth is affected. *Ainslie.*

℞ Blue pill, four grains.
Compound powder of squill, six grains.
Powdered ipecacuanha, two grains.
Syrup of ginger, sufficient.

Mix, and make three pills. To be taken in a day; in hepatic obstruction, threatening dropsy. *Ainslie.*

℞ Blue pill,
Antimonial powder, each, two and a half grains.
Opium, half a grain.
Syrup of ginger, sufficient.

Make a pill. To be taken at bedtime; in venereal blotches, attended with diarrhœa. *Ainslie.*

Abernethy's Pills.

℞. Blue pill, ten grains.
Powdered jalap, twenty grains.
Syrup of buckthorn, sufficient.

Mix well, and divide into six pills. Two at night, with a wineglassful of infusion of senna, in the morning. *Cooley.*

Belloste's Pills.

℞. Mercury, Honey, Aloes, each, ninety grains.
Rhubarb, forty-five grains.
Scammony, thirty grains.
Black pepper, fifteen grains.

Rub the mercury with the honey and a little aloes until the globules have disappeared; then mix with the remaining powders, and form one hundred and twenty pills. *Paris Codex.*

These are the *purgative mercurial pills* frequently employed in France in syphilitic and herpetic diseases.

Mercurial Mixture.

℞. Mercury, six drachms.
Syrup of poppies, one ounce.

Triturate till globules disappear, and add

Orange-flower water, two fl. ounces.
Rose water, one fl. ounce.

Mix well. Dose, a spoonful, morning and night, in gastrodynia and spasmodic vomiting. *Cadet de Gassicourt.*

Mercurial Ointment.

℞. Mercury, twenty-four troyounces.
Lard,
Suet, each, twelve troyouoces.

Rub the mercury with a troyounce of the suet and a little of the lard, till the globules disappear; add the remainder of the lard, and of the suet softened with a gentle heat, mixing well. *U. S. Ph.*

The proportions of *Brit. Ph.* are sixteen ounces each of mercury and prepared lard, to one ounce of suet.

℞. Mercury, fifty parts.
White wax, four parts.
Benzoinated lard, forty-six parts.

Melt the wax and lard, and with a portion of it triturate the mercury, in a warm mortar, until the globules disappear; then add the remainder, and mix. *Paris Codex.*

This is the strong mercurial ointment. It can be weakened by the addition of lard, as may be wished. Used as an inunction to mercurialize the system, by rubbing about a drachm on the inside of the thighs, twice a day.

℞. Mercury, twenty-four ounces.
Lard, rendered rancid by exposure in a damp, divided state, four ounces.
Lard, nineteen ounces.
Suet, one ounce.

Triturate the mercury and rancid lard, until the globules disappear; then add the lard and suet, and triturate until the texture of the mass is uniform. *W. Procter.*

℞. Mercury, six parts.
Old mercurial ointment, one part.

Triturate until all globules disappear; add

Suet, four parts,
Lard, eight parts,

previously melted together, and mix. *Ph. Germ.*

Camphorated Mercurial Ointment.

℞. Mercurial ointment, one ounce.
Camphor, one drachm.

Mix. Used like the former; also to disperse indolent swellings.

Compound Ointment of Mercury.

℞. Mercurial ointment, six ounces.
Yellow wax,
Olive oil, each, three ounces.
Powdered camphor, one ounce and a half.

Melt the wax, add the oil, and when nearly cold, the camphor and ointment, and mix thoroughly. *Brit. Ph.*

℞. Mercurial ointment, one ounce.
Oil of turpentine,
Camphor, each, two drachms.
Simple cerate, one ounce.

Mix well. Used as a rubefacient application over the region of the liver, when blisters cannot be used. *Ellis.*

℞. Mercurial ointment, two ounces.
Lard, twelve ounces.
Powdered stavesacre, three ounces.

Melt the lard, and add the other ingredients, mixing well. As an application to destroy lice. *Giordano.*

℞. Mild mercurial ointment, eight parts.
Soft soap, two parts.
Camphor, one part.

Rub well together. Recommended in periostitis and engorgement of the testicles. *Swediaur.*

Ointment of Mercury and Belladonna.

℞. Strong mercurial ointment, thirty parts.
Extract of belladonna, four parts.
" opium, one part.
Balsam of Peru, sufficient.

Mix well. As an application to painful hemorrhoidal tumors. *Mignot.*

Ointment of Mercury and Turpentine.

℞. Turpentine ointment,
Mercurial ointment,
each, equal parts.

Mix. *Digestif mercuriel* of the French. *Paris Codex.*

As an application to venereal ulcers.

Mercurial Cataplasm.

℞. Mercurial ointment, half an ounce.
Camphor, two drachms.
Boiling milk, three ounces.
Crumb of bread, sufficient.

Mix, and form cataplasm. *Radius.*

Mercurial Cerate.

℞. Mercurial ointment,
Simple cerate, equal parts.

Mix well. As a dressing to venereal ulcers. *Guibourt.*

Compound Mercurial Cerate.

℞. Mercurial ointment,
Soap cerate, each, four ounces.
Camphor, one ounce.

Rub well together. *Lond. Ph.*

As an application to disperse indolent swellings.

Mercurial Liniment.

℞. Mercurial ointment, one ounce.
Water of ammonia,
Liniment of camphor,
each, one fl. ounce.

Liquefy the ointment in the liniment with a gentle heat, add the ammonia gradually, and mix with agitation. *Brit. Ph.*

As a stimulating liniment, in chronic swellings, glandular tumors, etc.

Opiated Mercurial Liniment.

℞. Mercurial ointment, four parts.
Oil of sweet almonds, forty-eight parts.
Tincture of opium, three parts.

Mix well. Advised in inflamed ulcers of the glans penis, to be applied two or three times a day. *St. Marie.*

Mercurial Suppositories.

℞. Mercurial ointment, sixty grains.
Benzoinated lard,
White wax, each, twenty grains.
Oil of theobroma, eighty grains.

Melt, with a gentle heat, the lard, wax, and oil, add the ointment, stir well together, and make twelve suppositories. *Brit. Ph.*

Mercurial and Belladonna Plaster.

℞. Mercurial ointment, one ounce.
Ammoniac, six drachms.
Extract of belladonna, four drachms.
Hydrocyanic acid, thirty drops.

Make mass with ammoniac and extract, with a little water; mix mercurial ointment and acid, and rub the whole together. Useful as an application to scirrhous and scrofulous tumors. *Med. Chirurg. Ph.*

Mercurial Plaster.

℞. Mercury, six troyounces.
Olive oil,
Resin, each, two troyounces.
Lead plaster, twelve troyounces.

Melt the oil and resin together, and, when cool, rub the mercury with them till the globules disappear; gradually add the lead plaster previously melted, and mix well. *U. S. Ph.*

℞. Mercury, three ounces.
Olive oil, one fl. drachm.
Sublimed sulphur, eight grains.
Lead plaster, six ounces.

Heat the oil and sulphur until they unite, add the mercury, triturate until extinguished, and mix with the plaster previously melted. *Brit. Ph.*

℞. Mercury, eight parts.
Common turpentine, four parts.

Triturate until the globules disappear; add

Lead plaster, twenty-four parts.
Yellow wax, six parts.

previously melted together, and mix thoroughly. *Ph. Germ.*

Used as an application to buboes, venereal nodes, etc.

HYDRARGYRI ACETAS.

Acetate of Mercury.

Acetate of Protoxide of Mercury.

℞ Protonitrate of mercury, one part,
Distilled water, six parts.

Dissolve the salt in water, acidified with a little nitric acid, add a solution of acetate of sodium or potassium, filter, wash, and dry the precipitate. *Béral.*

Pills of Acetate of Mercury.

℞ Red oxide of mercury, one pound.
Distilled vinegar, eight pints.

Dissolve, and triturate a pint of this solution with

Flake manna, two pounds,

rubbing the mixture for a long time; dry before the fire, often stirring; when of a proper consistence form pills of a grain and a half. *Guibourt.*

These pills are highly esteemed under the name of *Keyser's anti-venereal pills.* They contain, at first, the acetate of the deutoxide, but this gradually changes to the acetate of the protoxide, then to an oxide; therefore, the following have been substituted.

℞ Acetate of mercury, Flake manna, Powdered gum Arabic, each, one scruple.
Rose water, sufficient.

Beat into mass, and form twenty pills. As a sialagogue, three to be taken at night, or one three times a day. *Ellis.*

Pills of Acetate of Mercury and Opium.

℞ Acetate of mercury, Opium, Camphor, each, thirty grains.
Syrup of poppies, sufficient.

Mix, and make thirty pills. *Carmichael.*

Solution of Acetate of Mercury.

℞ Acetate of mercury, ten or twelve grains.
Rose water, five fl. ounces.

Dissolve. As a lotion in obstinate cutaneous affections. *Niemann.*

Liniment of Acetate of Mercury.

℞ Acetate of mercury, one part.
Olive oil, two parts.
Lard, six parts.

Rub the salt with a little of the lard, and add gradually the remainder, and then the oil, constantly rubbing. Used as an application in herpes. *Van Mons.*

HYDRARGYRUM AMMONIATUM.

White Precipitate.

℞ Corrosive sublimate, six troyounces.
Distilled water, one gallon.
Solution of ammonia, eight fl. ounces.

Dissolve the corrosive sublimate in the water with the aid of heat, and when cold add the solution of ammonia, frequently stirring. Wash the precipitate thoroughly, and dry it. *U. S. Ph.*

This is seldom, if ever, used, except as an external remedy.

Ointment of White Precipitate.

℞ White precipitate, forty grains.
Simple ointment, one troyounce.

Soften the ointment over a gentle fire, and mix the white precipitate. *U. S. Ph.*

Brit. Ph. uses one part of white precipitate to seven of simple ointment. *Ph. Germ.* one part to nine parts of lard.

As an application to cutaneous eruptions.

HYDRARGYRI BORAS.

Borate of Mercury.

℞ Calomel, twenty-two parts.
Borate of sodium, twenty-six parts.

Triturate together; in a quarter of an hour add a little water, then gradually, more, constantly rubbing, permit to settle, decant, wash the precipitate till the washings are insipid, and dry. *Van Mons.*

The borate of mercury is said to resemble calomel in its action. Dose, two grains a day, gradually augmenting.

HYDRARGYRI BROMIDUM.

Bromide of Mercury.

There are two bromides of mercury: one the protobromide, answering to calomel; the other the bibromide, like corrosive sublimate, an irritant poison.

Protobromide of Mercury.

℞. Solution of bromide of potassium, at will.

Add a weak solution of protonitrate of mercury as long as it causes a precipitate; wash this, and dry by a gentle heat. Dose, one grain a day, gradually increased, as an alterative; four or five grains as a purgative. *Magendie.*

Bi-bromide of Mercury.

℞. Bromine,
Mercury, each, equal parts.

Mix, and sublime. Dose, one-twentieth of a grain, gradually increased to a fourth. In syphilis. *Magendie.*

Ethereal Solution of Bi-bromide of Mercury.

℞. Bi-bromide of mercury, one grain.
Ether, one fl. drachm.

Dissolve. Dose, ten to twenty drops, in barley-water. In syphilis and lepra. *Werneck.*

HYDRARGYRI CHLORIDUM CORROSIVUM.

Corrosive Sublimate.

Corrosive sublimate is a very energetic and poisonous preparation, requiring much care in its exhibition. It will produce the usual effects of the other mercurials, but is less apt to salivate. It is much used in secondary syphilis, and as an alterative, and also as an external application, as a stimulant, and escharotic. The best antidote, when poisonous doses have been taken, is albumen, followed by an emetic.

Solution of Corrosive Sublimate.

℞. Corrosive sublimate,
Chloride of ammonium, each, ten grains.
Distilled water, one pint (imper.).

Dissolve. *Brit. Ph.*

A fl. ounce contains half a grain of the mercurial salt. The dose is from one to two fl. drachms, in some mucilaginous drink.

Alcoholic Solution of Corrosive Sublimate.

℞. Corrosive sublimate, one part.
Alcohol, one hundred parts.
Water, nine hundred parts.

Dissolve. A tablespoonful night and morning, in a glass of water, in milk, or in decoction of sarsaparilla. *Paris Codex.*

This is *Van Swieten's mercurial solution.*

Powder of Corrosive Sublimate and Copper.

℞. Corrosive sublimate,
Sulphate of copper, each, ten grains.
Nitrate of silver, six grains.

Mix. Applied to venereal excrescences, previously moistened with water. *Kruzer.*

Powder of Corrosive Sublimate and Zinc.

℞. Corrosive sublimate,
Sulphate of zinc, equal parts.

Mix. In onychia maligna, sprinkled on the sore, and covered with lint soaked in tincture of myrrh. *Perkins.*

Pills of Corrosive Sublimate.

℞. Corrosive sublimate, five grains.
Distilled water, thirty to forty drops.
Confection of roses, one scruple.
Powdered liquorice, sufficient.

Dissolve the corrosive sublimate in the water, and add the other articles, and rub well together. Make forty pills. One, three to four times a day, in syphilis. *Ellis.*

Compound Pills of Corrosive Sublimate.

℞. Corrosive sublimate, three grains.
Extract of guaiacum, twelve grains.
" opium, six grains.

Beat together, and make twenty pills. One, morning and evening. Each contains nearly one-sixth of a grain of the mercurial salt. They require much caution in their use. In syphilis. *Dupuytren's pills.* *Paris Codex.*

℞. Corrosive sublimate, six grains.

Dissolve in

Distilled water, sufficient,

and add

Extract of hemlock, one drachm.
Powdered hemlock, sufficient.

Beat into mass, and make forty-eight pills, to be given like the above. Each pill contains an eighth of a grain of corrosive sublimate. *Ellis.*

Corrosive Sublimate Mixture.

℞ Corrosive sublimate, four grains.
Chloride of ammonium, eight grains.
Diluted alcohol, two fl. ounces.

Mix. A teaspoonful twice a day, in barley-water, in syphilis. *Ainslie.*

℞ Corrosive sublimate, eight grains.
Muriatic acid, twenty-four drops.
Comp. tincture of cardamom, eight fl. ounces.

Mix. Dose, two drachms morning and evening, in a wineglassful of sugar and water. In syphilis. *Guibourt.*

℞ Corrosive sublimate, two grains.
Distilled water, six fl. ounces.
Spirit of cinnamon,
Syrup, each, one fl. ounce.

Mix. One or two spoonfuls twice or thrice a day, in venereal cases. *Ellis.*

Lotion of Corrosive Sublimate.

℞ Corrosive sublimate, three to six grains.
Distilled water, sufficient.

Dissolve, and add

Extract of hemlock,
" chamomile,
each, two drachms.
Tincture of opium, one fl. drachm.
Honey of roses, one ounce.

Mix. As an application to venereal ulcers in the throat, and on the labia pudendi. *Rust.*

℞ Corrosive sublimate, one drachm.
Distilled water, six fl. ounces.

Dissolve, and add

Chloride of ammonium, two drachms.
Nitrate of potassium, half an ounce.

Dissolve. As a wash in itch. *Good.*

Cosmetic Lotion with Corrosive Sublimate.

℞ Blanched sweet almonds, one ounce.
" bitter almonds, four drachms.
Cherry-laurel water, ten fl. ounces.

Make an emulsion, and add

Corrosive sublimate, six grains.
Tincture of benzoin, six fl. drachms.
Lemon juice, four fl. drachms.

Mix. As a wash for eruptions on the face, to be used morning and evening, previously to be shaken. It must be used with caution. *Cadet de Gassicourt.*

Lotion of Corrosive Sublimate and Copper.

℞ Corrosive sublimate, two grains.
Acetate of copper, six grains.
Distilled water, two pints.

Dissolve. As a wash in obstinate porrigo *Augustin.*

Lotion of Corrosive Sublimate and Camphor.

℞ Corrosive sublimate, half a drachm.
Camphor, one drachm.
Diluted alcohol, one ounce.

Dissolve. As an application to destroy condylomata. *Phœbus.*

White's Caustic Lotion.

℞ Corrosive sublimate, five grains.
Nitrate of silver, ten grains.
Acetate of lead,
Sulphate of zinc,
each, ninety grains.
Water, six fl. ounces.

Mix. *Maryland Coll. Ph.*

Bateman's Mercurial Lotion.

℞ Corrosive sublimate, two grains.
Compound spirit of lavender, one fl. ounce.
Distilled water, four fl. ounces.

Dissolve. As a lotion in obstinate cutaneous eruptions. *Bateman.*

Antacrid Tincture.

℞ Powdered resin of guaiacum,
Canada balsam, each, one ounce.
Corrosive sublimate, one scruple.
Oil of sassafras, two fl. drachms.
Alcohol, eight fl. ounces.

Dissolve the mercurial salt in one-half of the alcohol, and then add the remainder, and the other ingredients; after a due digestion, filter. Ten to twenty drops morning and evening, in wine or water, in syphilis. *Ellis.*

Collyrium of Corrosive Sublimate.

℞. Corrosive sublimate, two grains.
Opium, ten grains.
Rose water, four fl. ounces.
Dissolve, and add
Mucilage of quince-seed, half an ounce.
Mix. *Van Mons.*

Injection of Corrosive Sublimate.

℞. Corrosive sublimate, three grains.
Water of rosemary,
Distilled water,
each, three fl. ounces.
Dissolve. As an injection in fistula lachrymalis. *Beer.*

℞. Corrosive sublimate, one drachm.
Alcohol, one fl. ounce.
Dissolve. Add from five to twenty drops to a solution of
Sulphate of zinc, five to ten grs.,
in
Water, four fl. ounces.
A drachm to be injected into the urethra three times a day, in gonorrhœa. *Whately.*

Cosmetic Wash.

℞. Blanched bitter almonds, six ounces.
Beef-tea, sixty-four ounces.
Make an emulsion, and add
Corrosive sublimate, half an ounce.
Lemon juice, ten ounces.
Solution of carbonate of potassium, half an ounce.
Incorporate gradually
White of eggs, six ounces.
Strain, and add
Camphor, rubbed with mucilage gum Arabic, half a drachm.
Mix well. It is said to be an effectual wash for eruptions on the face, but must be used with extreme caution, and very seldom. *Van Mons.*

HYDRARGYRI CHLORIDUM MITE.

Calomel.

Calomel is prepared by several modes, on the large scale, and is seldom or never made by the apothecary. The several processes will be found, with judicious observations on each, in the U. S. Dispensatory. It is used in almost every disease, either as a purgative, alterative, anthelmintic, etc. As a purgative it is peculiar, in not producing effects in proportion to the dose.

Powder of Calomel and Antimony.

℞. Calomel,
Golden sulphuret of antimony, equal parts.
Triturate together. This powder has been much celebrated under the name of *Plummer's Alterative*, as a deobstruent and alterative. The dose is from five to ten grains a day, in divided doses. It should be used recently prepared, as in a short time it changes to sulphuret of mercury, and oxide of antimony. *Guibourt.*

Powder of Calomel and Jalap.

℞. Calomel, five grains.
Powdered jalap, ten grains.
Mix. As a purgative, to be mixed with syrup or molasses. *Ellis.*

℞. Calomel, three grains.
Powdered jalap,
Sugar, each, ten grains.
Mix. Make a powder to be taken at night, or early in the morning, in bilious fevers, and obstructed bowels. *A. T. Thomson.*

Powder of Calomel, Antimony, and Henbane.

℞. Calomel, one grain.
Golden sulphuret of antimony, three grains.
Powdered extract of henbane, one grain.
Powdered sugar, half a drachm.
Mix. To be taken night and morning, in spasmodic diseases; it is said to have proved very useful in nyctalopia. *Phœbus.*

Powder of Calomel, Jalap, and Rhubarb.

℞. Calomel, } each,
Powdered jalap, } five grains.
" rhubarb, }
Oil of cinnamon, one drop.
Mix. As a purgative, to be given in syrup or molasses. *Ellis.*

Powder of Calomel and Foxglove.

℞. Calomel, three grains.
Powdered foxglove, four grains.
Sugar, one drachm.

Mix, and divide into twelve powders. Two a day, in chronic hydrocephalus.
Berends.

Powder of Calomel, Nitrate of Potassium, etc.

℞ Calomel, six grains.
Nitrate of potassium, one drachm.
Tartar emetic, half a grain.

Mix, and divide into six powders. One every two hours, as a diaphoretic in febrile affections. *Ellis.*

Powder of Calomel and Opium.

℞. Calomel, sixteen grains.
Powdered opium, four grains.
" ipecacuanha, eight grains.

Mix, and divide into eight powders. One to be taken every hour or two. In dysentery. *Chapman.*

Powder of Calomel and Gamboge.

℞. Calomel, five grains.
Powdered gamboge, three to six grains.

Mix. As an anthelmintic. *Ellis.*

℞. Calomel,
Powdered gamboge,
" jalap,
" rhubarb,
" cinnamon,
} each, two drachms.

Mix. Dose, five to twenty grains.
A. T. Thomson.

Anthelmintic Purgative.

℞. Calomel, three grains.
Compound powder of scammony, twelve grains.

Mix. To be taken at once, in cases of lumbrici. *A. T. Thomson.*

Powder of Calomel and Pink Root.

℞. Calomel, four grains.
Powdered pink root, ten grains.

Mix. To be taken two mornings in succession; also on afternoon of second day, followed by a mild purgative; as an anthelmintic for children over four years of age. *Ellis.*

Dry Collyrium of Calomel.

℞. Calomel,
Powdered sugar, each, half a drachm.

Mix. To be blown into the eye, in ulcers of the cornea. This is *Velpeau's collyrium* of the *Paris Codex.* Powdered opium was added to it by Radius.

Calomel Pills.

℞. Calomel, half an ounce.
Powdered gum Arabic, one drm.
Syrup, sufficient.

Mix the calomel and gum, then beat with syrup into mass, and divide into two hundred and forty pills. *U. S. Ph.* 1850.

A very convenient form to give calomel, whether as purgative, alterative, etc.; each pill contains one grain of calomel.

Pills of Calomel, Quinia, etc.

℞. Calomel, six grains.
Powdered opium, three grains.
Sulphate of quinia, twelve grains.
Syrup, sufficient.

Beat into mass, and form twelve pills. One, night and morning, as an alterative in conditions following bilious fever. *Ellis.*

Pills of Calomel and Acetate of Lead.

℞. Acetate of lead, half a drachm.
Calomel, five grains.
Confection of roses, sufficient.

Form mass, and divide into ten pills. One to be given every two to four hours, in hematemesis, etc. *Ellis.*

Pills of Calomel and Dandelion.

℞. Calomel, four grains.
Extract of dandelion, eighteen grs.

Mix. To be taken in a day, in divided doses, in abdominal obstructions. *Brera.*

Pills of Calomel, Squill, etc.

℞. Plummer's powder, twelve grains.
Ammoniac, two grains.
Extract of dandelion, three grains.
Powdered squill, half a drachm.

Beat together, and form pills of three grains. Dose, five, three or four times a day, in engorgements of the abdominal viscera, with anasarca supervening on intermittent fever. *St. Marie.*

Pills of Calomel and Iron.

℞. Calomel,
Golden sulphuret of antimony,
Sulphate of iron,
Myrrh,
} each, one drachm.
Syrup, sufficient.

Beat into mass, and form pills of three grains. Dose, four, morning and evening, in the same cases as above. *Swediaur.*

Pills of Calomel and Catechu.

℞. Powdered catechu,
Copaiba, each, three drachms.
Calomel, one scruple.
Syrup of comfrey, sufficient.

Beat into mass, and make one hundred and fifty pills. Four, thrice a day, in leucorrhœa or gonorrhœa. *St. Marie.*

Compound Calomel Pills.

℞. Sulphurated antimony,
Calomel, each, twelve grains.
Guaiacum resin,
Molasses, each, twenty-four grains.

Mix well, and make twenty-four pills.

The compound pills of antimony of *U. S. Ph.*

℞. Calomel,
Sulphurated antimony, each, one ounce.
Powdered guaiacum resin, two ounces.
Castor oil, one fl. ounce.

Rub the calomel with the antimony, and then with the other ingredients till well incorporated. *Brit. Ph.*

These pills are known as *Plummer's pills*, and have been much employed in chronic rheumatism and obstinate cutaneous affections, especially when there is a syphilitic taint. The dose is from three to six grains, twice a day.

℞. Calomel, two scruples.
Precipitated sulphuret of antimony, one drachm.
Guaiacum, two drachms.
Copaiba, sufficient.

Mix, and make sixty pills. Three at night, in venereal herpes, till mouth is affected; also using frequent tepid baths. *Ainslie.*

Pills of Calomel and Colocynth.

℞. Compound extract of colocynth, forty-eight grains.
Calomel, one scruple.

Mix, and divide into twenty pills. Two or three will act as a cathartic. *Ellis.*

℞. Compound extract of colocynth, eight grains.
Calomel, one grain.
Extract of hyoscyamus,
Acetic extract of colchicum,
Ipecacuanha, } each, four grains.

Mix, and make eight pills. Known as Clapp's pills. *Maryland Coll. Ph.*

Pills of Calomel and Antimony.

℞. Calomel, ten grains.
Golden sulphuret of antimony, one scruple.
Extract of pot marigold,
" hemlock, each, two drachms.

Mix, and beat into mass, and form pills of two grains. Dose, five, thrice a day, in chronic indurations. *Rust.*

℞. Calomel, six grains.
Kermes mineral, twelve grains.
Syrup of elder, sufficient

to make six pills. One every two hours in the decline of peripneumonia, and in the cough of children arising from worms. *Brera.*

Pills of Calomel and Guaiacum.

℞. Calomel,
Resin of guaiacum, each, two drachms.
Powdered mallow, four ounces.
Syrup, sufficient.

Form mass, and make pills of four grains. Dose, four or five a day, in syphilis. *Alibert.*

Pills of Calomel, Jalap, etc.

℞. Calomel,
Resin of jalap,
Compound extract of rhubarb,
Soap, } equal parts.

Form mass, and make pills of one grain. Dose, ten to twelve grains, as a purgative and anthelmintic. *Paris Codex.*

White's Gout Pills.

℞. Calomel,
Acetic extract of colchicum,
Socotrine aloes,
Ipecacuanha, } each, sixty grains.

Mix and form sixty pills. *Maryland Coll. Ph.*

Pills of Calomel and Opium.

Calomel, two grains.
Opium, half a grain.

Mix. Thrice a day, in neuralgia of the face. *Leslie.*

Electuary with Calomel, etc.

℞ Calomel, ten grains.
Powdered rhubarb, " santonica, " valerian, each, two drachms.
Conserve of wormwood, one ounce and a half.
Oxymel of squill, sufficient.

Mix. A drachm to half an ounce, in epilepsy complicated with worms. *Swediaur.*

Calomel Ointment.

℞ Calomel, eighty grains.
Prepared lard, one ounce.

Mix. *Brit. Ph.*

℞ Calomel, one drachm.
Rose ointment, three drachms.

Mix. As an application in herpes. *Dupuytren.*

℞ Calomel, one drachm.
Sublimed sulphur, two drachms.
Lard, one ounce.

Mix well. In obstinate cutaneous affections. *Fouquier.*

Ointment of Calomel and Squill.

℞ Calomel,
Powdered squill, each, half a drachm.
Lard, two drachms.
Oil of roses, four drops.

Mix. In chronic swellings of the joints. *Dupuytren.*

Ointment of Calomel and Acetate of Copper.

℞ Calomel,
Acetate of copper, each, one scruple.
Lard, eleven drachms.

Mix well. As an application in porrigo. *Cadet de Gassicourt.*

Ointment of Calomel, Alum, etc.

℞ Calomel, two drachms.
Burnt alum,
Litharge, each, half an ounce.
Oil of turpentine, two fl. drachms.
Simple ointment, one ounce and a half.

Mix well. As an application to tinea capitis, to be applied at night, and washed off in the morning. *Ellis.*

Calomel and Camphor Ointment.

℞ Calomel, half a drachm.
Camphor, twelve grains.
Lard, one ounce.

Mix. As an application in lichen. *Biett.*

HYDRARGYI ET QUINIÆ CHLORIDUM.

CHLORIDE OF MERCURY AND QUINIA.

℞ Bichloride of mercury, one part.
Muriate of quinia, three parts.

Dissolve separately in the smallest quantity of water, and mix the solutions. Collect the precipitate, and dry by a gentle heat. *McDermott.*

Pills of Chloride of Mercury and Quinia.

℞ Chloride of mercury and quinia, fifteen grains.
Opium, six grains.
Crumb of bread, sufficient.

Mix well, and make thirty pills. One, thrice a day, to produce salivation. *Hamilton.*

HYDRARGYRI CYANIDUM.

CYANIDE OF MERCURY.

℞ Ferrocyanide of iron, five troyounces.
Sulphuric acid, four troyounces and two drachms.
Red oxide of mercury,
Water, each, sufficient.

Dissolve the ferrocyanide in twenty fl. ounces of water, dilute the acid with ten fl. ounces of water, mix in a retort, and distil nearly to dryness into a receiver containing ten fl. ounces of water and three troyounces of red oxide. Reserve two fl. ounces of the distillate, agitate the remainder with sufficient red oxide to destroy the odor of hydrocyanic acid, filter, add the reserved liquid, and in a dark place, evaporate, crystallize, and dry; keep the crystals protected from the light. *U. S. Ph.*

It is given in doses of a sixteenth to an eighth of a grain, in syphilis, chronic inflammation of the thoracic and abdominal

organs, etc., and also is employed externally in porrigo, and other cutaneous affections.

Solution of Cyanide of Mercury.

℞ Cyanide of mercury, four grains.
Distilled water, eight fl. ounces.

Dose, half a drachm to a drachm. *Chaussier.*

Compound Pills of Cyanide of Mercury.

℞ Cyanide of mercury, six grains.
Opium, twelve grains.
Crumb of bread, one drachm.
Honey, sufficient.

Mix, and make ninety-six pills. One, morning and evening. *Guibourt.*

℞ Cyanide of mercury, eighteen grains.
Chloride of ammonium,
Extract of aconite,
each, three drachms.
Extract of box, one ounce and a half.
Oil of anise, one scruple.

Beat together, and make four hundred pills. Two, morning and evening. *Cadet.*

Compound Tincture of Cyanide of Mercury.

℞ Cyanide of mercury, eighteen grains.
Water, fourteen fl. ounces.
Alcohol, ten fl. ounces.
Chloride of ammonium,
Extract of aconite,
each, three drachms.
Extract of box, one ounce and a half.
Oil of sassafras, twenty-four drops.

Dissolve the cyanide in the water, add the ammonia, extract, and alcohol, let stand for some hours, filter, and add essential oil.

Gargle of Cyanide of Mercury.

℞ Cyanide of mercury, ten grains.
Barley water, one pint.
Honey of roses, one ounce.

Mix. As a gargle. *Brera.*

℞ Sarsaparilla, half an ounce.
Water, sixteen fl. ounces.
Boil, and add towards close of operation
Fresh hemlock, two drachms.

Strain, and add to eight ounces of filtered liquid,
Cyanide of mercury, two grains.

As a gargle. *Muller.*

Ointment of Cyanide of Mercury.

℞ Cyanide of mercury, twelve grains.
Lard, one ounce.

Rub well together. As an application to venereal ulcers. *Foy.*

℞ Cyanide of mercury, sixteen grains.
Lard, one ounce.
Oil of lemon, fifteen drops.

Rub together. As an application to moist tetter. *Biett.*

HYDRARGYRI IODIDUM RUBRUM.

Red Iodide of Mercury.

℞ Corrosive sublimate, one troyounce.
Iodide of potassium, ten drachms.
Distilled water, sufficient.

Dissolve the corrosive sublimate in a pint and a half, and the iodide in half a pint, of the water, and mix the solutions. Filter, and wash the collected precipitate with distilled water. Dry by a gentle heat, and keep in a well-stopped bottle. *U. S. Ph.*

Brit. Ph. directs to use the water boiling hot and obtains the red iodide as a crystalline powder.

Much more active than the green iodide. Used in the same cases, in doses of a sixteenth, gradually increased to the fourth of a grain.

Pills of Red Iodide of Mercury.

℞ Red iodide of mercury, one grain.
Extract of juniper, twelve grains.
Powdered liquorice, sufficient.

Mix, and make eight pills. One, morning and evening. *Guibourt.*

℞ Red iodide of mercury, five grains.
Syrup, sufficient.

Rub well together, and then with
Crumb of bread,
Sugar, each, sufficient

to make sixty pills. Two, morning and evening, gradually increasing. *Radius.*

Wash of Red Iodide of Mercury.

R. Red iodide of mercury, twelve grains.
Distilled water, six fl. ounces.

Mix. As a lotion to scrofulous ulcers. *Radius.*

Tincture of Red Iodide of Mercury.

R. Red iodide of mercury, twenty grains.
Alcohol (.837), one fl. ounce and a half.

Dissolve. Dose, five to ten drops, in distilled water. *Foy.*

Ethereal Tincture of Red Iodide of Mercury.

R. Red iodide of mercury, twenty grains.
Ether, one ounce and a half.

Dissolve. Rather more powerful than the last, and therefore to be given in smaller doses. *Magendie.*

Ointment of Red Iodide of Mercury.

R. Red iodide of mercury, sixteen grains.
Ointment, one troyounce.

Rub well together. *U. S. Ph.*

Brit. Ph. uses one ounce avoirdupois of simple ointment.

It is more active than the ointment of the iodide, and is used as a dressing to obstinate venereal ulcers.

R. Red iodide of mercury, fifteen grains.
Lard, one ounce.
Essence of bergamot, twenty drops.

Mix well. As an application to chronic cutaneous affections. *Foy.*

HYDRARGYRI IODIDUM VIRIDE.

GREEN IODIDE OF MERCURY.

R. Mercury, one ounce.
Iodine, five drachms.
Alcohol, sufficient.

Rub the mercury and iodine together, adding sufficient alcohol to form a soft paste, and continue rubbing till globules disappear. Dry the iodide in the dark, with a gentle heat, and keep from light, in a well-stopped bottle. *Brit. Ph.*

U. S. Ph. and *Ph. Germ.* proceed as above, but direct the product, before drying, to be thoroughly washed with alcohol to remove any red iodide which may have been formed. The product has a greenish-yellow color, and is named *yellow iodide of mercury* by *Ph. Germ.* Yvon has recently prepared it in yellow crystals by sublimation below 482° F.

The dose is about a grain a day, gradually increased to three or four. Used in scrofula, and scrofulous syphilis.

Powder of Iodide of Mercury.

R. Iodide of mercury, one to eight grains.
Magnesia, one drachm.

Mix. Divide into twelve powders. One, three times a day. *Radius.*

Pills of Iodide of Mercury.

R. Iodide of mercury, five grains.
Confection of roses, sufficient.

Mix, and make thirty pills. One, three times a day. *Ellis.*

R. Iodide of mercury, one drachm.
Confection of dog-rose, three drachms.
Powdered ginger, one drachm.

Beat together. Dose, five to ten grains. *Lond. Ph.*

R. Iodide of mercury, one grain.
Extract of juniper, twelve grains.
Powdered liquorice, sufficient.

Mix, and make eight pills. Two, morning and evening, gradually increasing to double the number. *Magendie.*

Compound Pills of Iodide of Mercury.

R. Iodide of mercury, six grains.
Extract of opium, four grains.
Lactucarium, twenty-four grains.
Extract of guaiacum, forty-eight grains.

Beat together. and form forty-eight pills. In syphilis of children; one pill to a child six months old, and two to four at more advanced ages. *Ricord.*

R. Iodide of mercury, half a drachm.
Extract of guaiacum, one drachm.
" lettuce, two scruples.
" sarsaparilla, sufficient.

Mix, and make seventy-two pills. One, and then two daily. *Biett.*

R. Iodide of mercury seventy-five grains.
Extract of opium, thirty grains.

Confection of roses, two drachms and a half.
Powdered liquorice root, sufficient.

Mix, and make one hundred pills.

Known as *Ricord's pills of opium and iodide of mercury.* *Paris Codex.*

℞ Iodide of mercury, two scruples.
Aloes, } each, half
Sulphate of iron, } each, half
Myrrh, } each, half a drachm.
Oil of savine, twenty drops.

Mix, and make twenty-four pills. One, thrice a day, in amenorrhœa. *Barbour.*

Ointment of Iodide of Mercury.

℞ Iodide of mercury, one scruple.
Lard, one ounce and a half.

Rub well together. In scrofulous swellings, indolent glandular tumors, etc. *Soubeiran.*

℞ Iodide of mercury, one ounce.
White wax, two ounces.
Lard, six ounces.

Melt the wax and lard and stir in the iodide. *Lond. Ph.*

As a dressing to scrofulous ulcers, etc.

℞ Iodide of mercury, six grains.
Acetate of morphia, eight grains.
Lard, one ounce.

Rub well together. As an application to obstinate glandular swellings. *Pelletan.*

℞ Iodide of mercury, one drachm.
Soap, half a drachm.
Rose water, two drachms.
Rose ointment, six drachms.

Mix. *Riecke.*

HYDRARGYRI NITRAS.

Nitrate of Mercury.

Nitrate of the Protoxide of Mercury.

℞ Mercury, four parts.
Nitric acid, three parts.
Water, one part.

Leave in contact for twenty-four hours; wash the crystals with nitric acid, and dry them. *Paris Codex.*

Pills of Protonitrate of Mercury.

℞ Protonitrate of mercury, ten grains.
Extract of liquorice, forty grains.

Beat into mass with a little water, and form sixty pills. *Foy.*

Ointment of Nitrate of Mercury.

℞ Mercury, one troyounce and a half.
Nitric acid, three troyounces and a half.
Lard, sixteen troyounces and a half.

Dissolve the mercury in the acid, heat the lard in an earthen vessel to 200°, remove from the fire, add the solution, stir with a wooden spatula until effervescence ceases and until the ointment stiffens. *U. S. Ph.*

℞ Mercury, four ounces.
Nitric acid, twelve fl. ounces.
Prepared lard, fifteen ounces.
Olive oil, thirty-two fl. ounces.

Operate as directed for the preceding. It is directed to use the melted fats hot, without indicating the precise temperature. *Brit. Ph.*

This ointment is sometimes made with fresh butter, when it is of a firm consistence.

A stimulant and alterative application, used in most cases diluted with lard. Employed in various skin diseases, etc. It is known under the name of *Citrine ointment.*

Ointment of Nitrate of Mercury and Lead.

℞ Mercury, four parts.
Lead, half a part.

Dissolve separately in
Nitric acid, sufficient.

Then mix
Oil of almonds, twenty-four parts,
Lard, forty-eight parts,

first with the mercurial, and then with the saturnine solution; rub well together. *Van Mons.*

Advised by Armstrong in porrigo favosa.

Liniment of Nitrate of Mercury.

℞ Ointment of nitrate of mercury, two ounces and a half.
Simple cerate, seven ounces and a half.
Olive oil, five fl. ounces and a half.

Mix well. *Beasley.*

℞ Ointment of nitrate of mercury,
Almond oil, equal parts.

Triturate together till perfectly mixed. *Sir H. Halford.*

Solution of Nitrate of Mercury.

℞ Mercury, three troyounces.
Nitric acid, five troyounces.
Distilled water, six fl. drachms.

Dissolve and evaporate to seven troyounces and a half. Or

℞. Red oxide of mercury, three troyounces and two drachms.
Nitric acid, three troyounces and five drachms.
Distilled water, six fl. drachms.

Dissolve and evaporate to seven troyounces and a half. *U. S. Ph.*

℞. Mercury, four parts.
Nitric acid, six parts.
Water, two parts.

Dissolve, and evaporate to nine parts. *Paris Codex.*

A powerful caustic and escharotic, used in obstinate skin diseases. The part to which it is applied becomes white, and in a few days a yellow scab falls off.

Solution of Protonitrate of Mercury.

℞. Protonitrate of mercury, twenty parts.
Nitric acid, three parts.

Triturate in a mortar, avoiding heat, and dissolve in sufficient water to make the weight two hundred parts. Prepare when needed for dispensing. *Ph. Germ.*

Dose, one to two drops, and externally in syphilitic ulcers.

HYDRARGYRI OLEAS.

Oleate of Mercury.

This preparation has been introduced by Prof. J. Marshall, and is recommended as far preferable to mercurial ointment; it should merely be applied with a brush or lightly spread over the part with one finger. Combined with morphia, it has proved of service in chronic rheumatism and gout. The following combination is generally employed.

Oleate of Mercury and Morphia.

℞. Pure oleic acid, seven thousand grains.
Oxide of mercury, seven hundred grains.
Morphia, one hundred and forty grains.

Digest at or below 150° in a closed vessel out of contact with the atmosphere, until dissolved. *Am. Journ. Ph.* 1873, p. 97.

Commercial oleic acid always reduces a portion of the oxide of mercury; the precipitated mercury should be collected, and the weight of oxide of mercury which it represents should be deducted from the weight used, when the proportion dissolved is readily calculated.

Ch. Rice, in *Am. Journ. Ph.* 1873, p. 1.

Mr. L. Dohme has suggested to prepare this compound by precipitating a solution of nitrate of mercury by one of oleate of potassium; the precipitate is dissolved in oleic acid, or in a mixture of alcohol and oleic acid, when it remains permanently fluid.

HYDRARGYRI OXIDUM NIGRUM.

Black Oxide of Mercury.

℞. Calomel,
Potassa, each, four ounces.
Water, one pint.

Dissolve the potassa in the water, let settle and decant; add the calomel, stirring well till the black oxide is formed, decant, wash the oxide with distilled water, and dry with a gentle heat. *U. S. Ph.* 1840.

Alterative, purgative, and sialagogue. Dose, one-quarter of a grain to two grains.

Black Wash.

℞. Calomel, thirty grains.
Lime water, ten fl. ounces.

Mix. *Brit. Ph.*

℞. Calomel, one drachm.
Lime water, six troyounces.

Mix well. As a lotion to venereal and phagadenic ulcers. *Ph. Germ.*

℞. Calomel, half a drachm.
Powdered opium, two drachms.
Lime water, two fl. ounces.

Mix. As a dressing for chancres. *Rust.*

Pills of Black Oxide of Mercury.

℞. Black oxide of mercury, one drachm.
Confection of roses, three drachms.
Powdered chamomile, half a drachm.

Mix. As a substitute for blue pill. *Tyson.*

Ointment of Black Oxide of Mercury.

℞. Black oxide of mercury, one part.
Lard, sixteen parts.

Subject to a temperature of 300° to 320° for an hour, stirring continually, remove, and stir till cold. As a substitute for mercurial ointment. *Donovan.*

HYDRARGYRI OXIDUM RUBRUM (ET FLAVUM).

RED (AND YELLOW) OXIDE OF MERCURY.

Red Precipitate.

℞. Mercury, thirty-six troyounces.
Nitric acid, twenty-four troyounces.
Water, two pints.

Dissolve the mercury with a gentle heat, in the acid and water, and evaporate to dryness. Rub to powder, and heat in a shallow vessel, as long as red vapors arise. *U. S. Ph.*

℞. Mercury, eight ounces.
Nitric acid, four fl. ounces and a half.
Water, two fl. ounces.

Dissolve half the mercury in the nitric acid and water, and evaporate to dryness. Triturate the salt with the remaining mercury until uniformly blended together, and heat in a porcelain dish until vapors cease to be evolved. *Brit. Ph.*

Yellow Oxide of Mercury.

℞. Corrosive sublimate, four troyounces.
Solution of potassa, seventeen troyounces.
Distilled water, sufficient.

Dissolve the corrosive sublimate in five pints of the water, and add the solution of potassa. Let settle, decant, wash the precipitate with distilled water, dry with a gentle heat in a dark place, and preserve it protected from the light. *U. S. Ph.*

Ph. Germ. directs solution of soda, instead of potassa, to be used for precipitating.

The red and yellow oxides of mercury are seldom used internally in this country, as they are harsh and uncertain in their operation, but are much employed externally as stimulants and escharotics.

Pills of Red Oxide of Mercury.

℞. Red oxide of mercury,
Powdered opium, each, one grain.
Oil of cloves, two drops.

Mix, and make three pills. One, every night for a week, in venereal complaints. *Ellis.*

℞. Red oxide of mercury, three grains.
Acetate of morphia, one grain.
Powdered mallow root,
Water, each, sufficient.

Mix, and form twenty pills. One, morning and evening. *Radius.*

Powder of Red Oxide of Mercury.

℞. Red oxide of mercury,
Burnt alum, each, half a drachm.
Powdered savine, two drachms.

As an application to condyloma, whitlow, etc. *Phœbus.*

Yellow Wash.

℞. Corrosive sublimate, eighteen grains.
Lime water, ten fl. ounces.

Mix. *Brit. Ph.*

Yellow wash of *Ph. Germ.* is nearly identical with this.

℞. Corrosive sublimate, one scruple.
Carbonate of potassium, one drachm.

Rub together, and add gradually

Distilled water, one pint.

Mix. *Span. Ph.*

Employed as lotions to venereal and phagadenic ulcers; must be shaken up when used.

Ointment of Red Oxide of Mercury.

℞. Red oxide of mercury, in very fine powder, one drachm.
Simple ointment, seven drachms.

Rub the oxide with the ointment gradually added, and mix well. *U. S. Ph.*

Brit. Ph. directs the same strength, but uses an ointment made of one part of yellow wax and three parts of almond oil. *Paris Codex* directs one part of the oxide to fifteen parts of rose ointment. *Ph. Germ.* directs one part of the oxide to nine parts of lard; and under the name of *ophthalmic ointment*, a weaker ointment which is exactly one-seventh the strength directed by *U. S. Ph.*

An efficacious, stimulating application to foul and indolent ulcers, psorophthalmia, etc. Where it is too stimulating, dilute with lard.

℞. Red oxide of mercury, one drachm.
Venice turpentine, one ounce.

Mix. As an application to indolent ulcers, and also used in itch. *Ellis.*

Ointment of Yellow Oxide of Mercury.

℞. Yellow oxide of mercury, one drachm.
Simple ointment, seven drachms.

Mix thoroughly. *U. S. Ph.*

Mainly used in affections of the eye, in which cases it is preferred to the preceding owing to the minute division of the oxide of mercury.

Ointment of Red Oxide of Mercury and Sulphur.

℞. Red oxide of mercury,
Mercury, each, one part.
Precipitated sulphur, sixteen parts.

Triturate till globules disappear, and add

Lard, thirty-two parts.

Rub well together. As a friction in the cure of itch. *Swediaur.*

Brown Ointment of Red Oxide of Mercury.

℞. Red oxide of mercury, one part.
Basilicon ointment, fifteen parts.

Rub well together. *Larrey's brown ointment.* Used in the treatment of indolent venereal ulcers. *Paris Codex.*

Ointment of Red Oxide of Mercury and Tin.

℞. Red oxide of mercury, two drachms.
Amalgam of equal parts of mercury and tin, four drachms.
Rose ointment, one ounce.

Rub well together, and add

Oil of peppermint, twenty drops.

Highly spoken of in hemorrhoidal tumors. *Cadet de Gassicourt.*

Ointment of Red Oxide of Mercury and Cinnabar.

℞. Red oxide of mercury, one ounce.
Cinnabar, one drachm.
Lard, one pound.

Rub well together. Employed in chronic inflammations of the eyelids. *Giordano.*

Ointment of Red Oxide of Mercury and Zinc.

℞. Red oxide of mercury, fifteen parts.
Oxide of zinc, six parts.
Yellow wax, twenty-four parts.
Lard, one hundred and forty parts.
Camphor, five parts.
Olive oil, ten parts.

Melt wax, add the lard, triturate with the oxide, and add the camphor dissolved in the oil. *Ph. Germ.*

Well known as *St. Yves ophthalmic ointment.*

℞. Red oxide of mercury, one part.
Sulphate of zinc, two parts.
Lard, ninety-six parts.

Rub well together. In scrofulous ophthalmia, as an application to the edges of the eyelids. *Dupuytren.*

Ointment of Red Oxide of Mercury and Lead.

℞. Fresh butter, three drachms.
Camphor, one grain.
Red precipitate,
Acetate of lead, each, ten grains.

Mix thoroughly. *Regent's ophthalmic ointment.* *Paris Codex.*

℞. Red oxide of mercury,
Oxide of zinc,
Burnt alum,
Acetate of lead, } each, one drachm.
Corrosive sublimate, fifteen grains.
Rose ointment, one ounce.

Rub well together. Celebrated as *Desault's ophthalmic ointment,* in the treatment of herpetic affections, etc. *Paris Codex.*

HYDRARGYRI PHOSPHAS.

PHOSPHATE OF MERCURY.

℞ Solution of nitrate of mercury, at will.

Add to it a solution of phosphate of sodium, as long as any precipitate is formed; decant, wash the precipitate well, and dry it. *Van Mons.*

This has been highly praised in secondary syphilis. The dose is half a grain to a grain, combined with sugar or some aromatic powder.

Pills of Phosphate of Mercury.

℞. Phosphate of mercury, nine grains.
Tartar emetic, one grain.
Opium, six grains.
Conserve of roses, sufficient.

Mix, and make nine pills. One in the evening, at bedtime. *Radius.*

HYDRARGYRI SULPHAS.

Persulphate of Mercury.

℞. Mercury, twenty ounces.
Sulphuric acid, twelve fl. ounces.

Expose them to heat in a porcelain vessel, and increase the heat until the mass becomes white and perfectly dry. *Brit. Ph.*

Not used as a remedy, but serves to form corrosive sublimate, calomel, and turpeth mineral.

Yellow Sulphate of Mercury. Turpeth Mineral.

℞. Persulphate of mercury, one part.
Warm water, twenty parts.

Rub together in an earthenware mortar, and pour off the supernatant liquid; wash the yellow powder with warm distilled water, as long as the washings are precipitated by caustic potassa. Dry.
Duo. Ph. 1826.

℞. Mercury, four troyounces.
Sulphuric acid, six troyounces.

Mix them in a glass vessel, and boil on a sand-bath till a dry white mass remains. Rub this into powder, and throw it into boiling water. Pour off the supernatant liquor, wash the yellow precipitate repeatedly in hot water, and dry it. *U. S. Ph.*

Turpeth mineral is alterative, errhine, and emetic. The dose, as an alterative, is from a quarter to half a grain; as an errhine, one grain mixed with five grains of some bland powder; as an emetic, two to five grains.

Compound Powder of Sulphate of Mercury.

℞. Sulphate of mercury, one grain.
Powdered asarabacca, one drachm and a half.

Mix, and divide into eight powders. One to be used as an errhine, twice a day, in gutta serena, ozæna, etc. *Ellis.*

Ointment of Sulphate of Mercury.

℞. Sulphate of mercury, one part.
Lard, eight parts.

Rub well together. As an application to herpes, porrigo, etc. *Soubeiran.*

℞. Sulphate of mercury, two drachms.
Chloride of lime, three drachms.
Oil of almonds, six drachms.
Lard, two ounces.

Melt together the oil and lard, and mix the two powders. More stimulating than the last. Used in obstinate cutaneous affections. *Chevallier.*

HYDRARGYRI SULPHURETUM NIGRUM.

Black Sulphuret of Mercury.

Ethiops Mineral.

℞. Mercury,
Sulphur, each, one pound.

Rub together till all globules disappear. *Ph. Germ.*

Employed as an alterative in cutaneous affections and glandular swellings. Dose, from five to thirty grains, or even more, several times a day.

Powder of Black Sulphuret of Mercury.

℞. Black sulphuret of mercury, four drachms.
Prepared chalk, two ounces.
Powdered amber, one ounce.

Mix well, and divide into sixty-four powders. One, and afterwards two a day, in a glass of sugar and water. In scrofulous affections. *St. Marie.*

℞. Black sulphuret of mercury,
Prepared oyster shell, each, one drachm.
Powdered orange-peel, half a drachm.

Mix, and make ten powders. Three a day, as an anthelmintic. *Phœbus.*

Pills of Black Sulphuret of Mercury.

℞. Black sulphuret of mercury,
Extract of bittersweet, each, two drachms.
Powdered mallow, sufficient.

Mix, and form one hundred and twenty pills. Four to five, three times a day. In obstinate cutaneous affections. *Radius.*

℞ Black sulphuret of mercury, one scruple.
Extract of dandelion, three drachms.
Ammoniac, two drachms.
Powdered squill, half a drachm.
Syrup, sufficient.

Beat together, and make pills of three grains. Dose, five, thrice a day. In ascites with engorgement of the abdominal viscera. *St. Marie.*

℞ Black sulphuret of mercury, half an ounce.
Guaiacum,
Soap, each, two drachms.
Golden sulphuret of antimony, two scruples.
Extract of horehound, sufficient.

Beat together, and form pills of two grains. Ten, morning and evening. In chronic rheumatism. *Baldinger.*

HYDRARGYRI SULPHURETUM RUBRUM.

Red Sulphuret of Mercury.

Cinnabar.

℞ Mercury, forty ounces.
Sulphur, eight ounces.

Melt the sulphur, and mix the mercury with it over the fire. When mass begins to swell remove from fire, and cover the vessel, to prevent combustion; when cool, powder and sublime. *U. S. Ph.*

At one time, cinnabar was much used as an alterative and anthelmintic, but it is now seldom employed except for fumigation.

Dose, five to ten grains.

Powder of Red Sulphuret of Mercury.

℞ Red sulphuret of mercury, half an ounce.
Powdered sugar candy, three ounces.
Oil of cinnamon, half a drachm.

Rub well together. At one time celebrated as cordial, stomachic, and analeptic, in doses of a scruple. *Swediaur.*

Pills of Red Sulphuret of Mercury.

℞ Red sulphuret of mercury,
Powdered Virginia snakeroot, each, half a drachm.
Syrup, sufficient.

Mix, and form twelve pills. Two to be taken thrice a day; alterative and diaphoretic; useful in obstinate cutaneous affections. *Ellis.*

℞ Red sulphuret of mercury,
Extract of wormwood,
" hemlock, } each, one drachm.

Beat together, and form pills of two grains. Dose, seven, morning and evening, in venereal glandular swellings. *Augustin.*

Fumigating Powder.

℞ Red sulphuret of mercury, four drachms.
Olibanum, two drachms.

Mix. To be thrown on a red hot iron, and the diseased parts exposed to the fumes. In herpes and venereal pustules. *Foy.*

Cerate of Red Sulphuret of Mercury.

℞ Powdered red sulphuret of mercury, fifteen grains.
Yellow resin, half an ounce.
Yellow wax,
Lard, each, half a pound.

Melt the resin, wax, and lard together, and add the sulphuret. As a dressing to ill-conditioned ulcers. *Swediaur.*

Ointment of Red Sulphuret of Mercury.

℞ Red sulphuret of mercury, one drachm and a half.
Chloride of ammonium, half a drachm.
Lard, two ounces.
Rose water, one fl. drachm.

Rub well together. Advised in pityriasis, to diminish the itching. *Radius.*

℞ Red sulphuret of mercury, one drachm.
Camphor, one scruple.
Simple cerate, one ounce.

Rub well together. Used in the treatment of herpes. To be applied at least twice a day. *Alibert.*

HYDRARGYRI TARTRAS.

Tartrate of Mercury.

℞ Black oxide of mercury, at will.
Tartaric acid, sufficient.

Boil together, in a due proportion of water, until the oxide is dissolved; filter, and

evaporate to the point of crystallization; wash the crystals. *Swediaur.*

Dose, one to two grains, twice a day.

Tartrate of Mercury and Potassium.

℞. Boiling saturated solution of nitrate of mercury, at will.

Add, drop by drop, a boiling saturated solution of bitartrate of potassium as long as a precipitate is formed; decant, wash the precipitate well with cold water, dissolve in boiling water, and set aside to crystallize. *Van Mons.*

Dose, one to three grains. Once very celebrated as *Pressavin's vegeto-mercurial liquor.*

HYDRASTIS.

Yellow Root.

This is the rhizome and root of *Hydrastis Canadensis*, a native plant, more common in the western than in the eastern States. The flowers are yellow and fugacious, and are succeeded by red fruit, resembling raspberries, but not eatable.

Sex. Syst. Polyand. polygyn. *Nat. Syst.* Ranunculaceæ.

Linn. Sp. Pl. 784. Griffith, Med. Bot. 82.

The root is contorted, rugose, and of a bright yellow color. It has a strong, somewhat narcotic odor, and a bitter taste. It is a powerful tonic bitter, and is also used in decoction as a wash in chronic ophthalmia. It is given in powder, decoction, or in the form of fluid extract. Dose, ten to twenty grains.

Fluid Extract of Hydrastis.

℞. Hydrastis, in powder, No. 80, sixteen troyounces.
Glycerin, two fluidounces.
Alcohol, fourteen fl. ounces.

Mix the liquids, moisten the powder with four fl. ounces of the mixture, pack in a percolator, add the remaining mixture, and macerate for four days; then, with a mixture of two parts of alcohol and one of water, percolate twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fluidounces, and mix with the reserved portion. *U. S. Ph.*

HYOSCYAMUS.

Henbane.

Several species of Hyoscyamus are medicinal, but the only one that is officinal, is the *H. niger*, a native of Europe, and now naturalized in some parts of the United States. It has a lurid appearance, and a rank, unpleasant odor.

Sex. Syst. Pentand. monog. *Nat. Syst.* Solanaceæ.

Linn. Sp. Pl. 257. Griffith, Med. Bot. 484.

All parts of the plant are active, but the leaves are generally employed, though the seeds also are officinal. The dried leaves have but little taste or smell. The seeds are small, roundish, somewhat reniform, of a grayish color; of an unpleasant smell, and an oily, somewhat bitter taste. They both owe their properties to an alkaloid, called *hyoscyamia.* They are anodyne and hypnotic, and are used to relieve pain, to procure sleep, and to quiet an excited nervous system. The dose of the powdered leaves is from five to ten grains; of the seeds rather less. The latter are used in the compound emulsion of almonds (see page 133).

Aqueous Extract of Hyoscyamus.

℞. Hyoscyamus leaves, one pound.

Bruise them in a stone mortar, adding a little water; express, heat the juice to boiling point, strain, and evaporate. *U. S. Ph.*

Paris Codex operates in same manner, but cools and strains the concentrated juice just previous to the final evaporation. *Brit. Ph.* separates first the chlorophyll, afterwards the albumen; the chlorophyll is again incorporated with the concentrated juice. *Ph. Germ.* removes chlorophyll and albumen by heat, and the mucilaginous constituents from the concentrated juice by alcohol.

Dose, two grains, twice a day, to be gradually increased till the system is affected.

Alcoholic Extract of Hyoscyamus.

℞. Hyoscyamus leaves, in powder, No. 50, sixteen troyounces.
Alcohol, four pints.
Water, two pints.

Mix the liquids, moisten powder with a pint of the mixture, pack firmly in a conical percolator, and displace six pints of tincture, using first remainder of mixture, afterwards diluted alcohol. Evaporate the percolate by a water-bath to proper consistence. *U. S. Ph.*

Dose, as for the last, and in the same manner.

Fluid Extract of Henbane.

℞. Hyoscyamus leaves, in powder, No. 50, sixteen troyounces.
Alcohol, twelve fl. ounces.
Glycerin, three fl. ounces.
Water, one fl. ounce.

Mix the liquids, moisten the powder with half a pint of the mixture, pack firmly into a percolator, add the remaining liquid, and macerate for four days; then with diluted alcohol, displace twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, a teaspoonful.

Compound Powder of Henbane.

℞ Powdered extract of henbane,
Oxide of zinc, each, ten grains.
Magnesia, half a drachm.
Sugar of milk, two drachms and a half.

Mix, and divide into ten powders. One every three hours, as a sedative, in nervous attacks. *Vogler.*

Compound Pills of Henbane.

℞ Extract of henbane,
" opium,
" belladonna,
" hemlock, each, one ounce.

Beat together, and form pills of one grain. Said to be useful in neuralgia of the face, in doses of one to six a day. *Pierquin.*

℞ Extract of henbane, half a drachm.
" opium, two grains.
Powdered foxglove,
" ipecacuanha, each, five grains.

Beat together, and make thirty pills. One every three hours, in hooping-cough. *Phœbus.*

℞ Extract of henbane,
" valerian,
Oxide of zinc, each, two drachms and a half.

Beat together, and form two hundred pills. *Paris Codex.*

In hysteria, neuralgia, etc., in doses of one to ten. Known as Meglin's pills.

℞ Extract of henbane, two scruples.
Powdered myrrh, one drachm and a half.
" squill, half a drachm.
Distilled water, sufficient.

Beat together, and make thirty pills. Two, night and morning, in catarrh and phthisis, with debility of the pulmonary organs. *Paris.*

Pills of Henbane and Opium.

℞ Extract of henbane,
" hemlock,
each, fifteen grains.
Powdered opium, four grains.

Beat into mass, and make ten pills. One at night, as an anodyne. *Ellis.*

Pills of Henbane and Ipecacuanha.

℞ Extract of henbane, ten grains.
Powdered ipecacuanha, five grains.

Mix, and make ten pills. One, every hour or two, in irritability of the bowels, with flatulence. *Ellis.*

Infusion of Henbane.

℞ Leaves of henbane, half an ounce.
Boiling water, one pint.

Infuse. As a lotion to painful ulcers. *Ellis.*

Compound Infusion of Henbane.

℞ Henbane leaves,
Poppy heads,
Mallow, each, one ounce.
Boiling water, four pints.

Infuse for an hour, and strain. As a fomentation to painful tumors, etc. *Radius.*

Mixture of Henbane.

℞ Oil of almonds, half an ounce.
Powdered gum Arabic, two drachms.
Oil of fennel, one drop.
Extract of henbane, six grains.
Sugar, half an ounce.
Water, two fl. ounces.

Rub well together. A spoonful every two hours, in catarrh. *Foy.*

Mixture of Henbane and Antimony.

℞ Extract of henbane, ten grains.
Antimonial wine, two fl. drachms.

Dissolve. In hooping-cough, in doses of five to ten drops. *Augustin.*

Tincture of Hyoscyamus.

℞ Hyoscyamus leaves, in powder, No. 60, four troyounces.
Diluted alcohol, sufficient.

Obtain by percolation two pints. *U. S. Ph.*

The tincture of *Brit. Ph.* is nearly of the same strength.

Dose, a fl. drachm.

Ethereal Tincture of Henbane.

℞. Henbane leaves, one part.
Ether, six parts.

Macerate for eight days, express, and filter. Dose, ten to twelve drops, three or four times a day. *Hesse Ph.*

Mixture of Henbane and Squill.

℞. Tincture of squill, ten drops.
Nitric acid, five drops.
Extract of henbane, three grains.
Water, one fl. ounce and a half.

Mix. In spasmodic asthma; to be repeated every three or four hours. *Bree.*

Anodyne Poultice.

℞. Poppy heads, one part.
Henbane, two parts.

Bruise, boil for a few seconds with twenty-four parts of water, express, and add

Powdered emollient species, four parts.

If laudanum is required, it should be poured upon the poultice without mixing it with the mass. *Paris Codex.*

Oleo-infusion of Hyoscyamus.

℞. Hyoscyamus, bruised, two parts.
Alcohol, one part.
Olive oil, twenty parts.

Digest hyoscyamus and alcohol in a covered vessel for several hours, afterwards with the oil until the alcohol is evaporated, express, and filter. *Ph. Germ.*

Liniment of Henbane.

℞. Extract of henbane, half a drachm.
White soap, two drachms.
Linseed oil, six ounces.

Mix. As an embrocation to glandular swellings. *Dupuytren.*

Ointment of Hyoscyamus.

℞. Extract of henbane, one part.
Simple ointment, nine parts.

Rub together. As an application to painful hemorrhoids. *Ph. Germ.*

Compound Ointment of Henbane.

℞. Leaves of henbane, } each, a handful.
" stramonium, }
" bittersweet, }
" elder, }
Lard, two pounds.

Heat together till all moisture is evaporated, and strain. As an application to frost-bites, chilblains, etc. *Spielmann.*

℞. Fresh poplar buds, four ounces.
Lard, twelve ounces.
Leaves of henbane, } each, one ounce.
" poppy, }
" belladonna, }
" black nightshade, }

Heat together till all moisture is evaporated. As a soothing and anodyne ointment to painful local affections. *Cottereau.*

This is much used in Europe, under the name of *Unguentum populeum.*

Plaster of Hyoscyamus.

℞. Yellow wax, four parts.
Turpentine,
Olive oil, each, one part.
Powdered hyoscyamus, two parts.

Melt wax and turpentine and mix well with the oil and powder. *Ph. Germ.*

I.

ICHTHYOCOLLA.

Isinglass.

This is the swimming bladder of several kinds of fish. The best, however, is procured from various species of sturgeon, inhabiting the more southern parts of Russia. It is a pure and nutritious gelatine, and is rather employed as food, and in the arts, than in medicine, in which it is only used as the basis of court-plaster.

Court-Plaster.

℞. Isinglass, one ounce.
Water, eight fl. ounces.

Macerate for twenty-four hours, and add

Alcohol, eight fl. ounces.

When perfectly dissolved, brush over strained silk or sarsonet several times, alternating with a layer of tincture of Peru or benzoin. *Cottereau.*

℞. Isinglass, sixty grammes.

Cover silk, one hundred and four centimetres in length and forty-two centimetres in width, with a solution of one-half the isinglass in eleven times its quantity of water. When dry cover again with a similar solution of the remaining isinglass, to which one hundred and twenty grammes alcohol and three grammes of glycerin have been gradually added. When dry, coat the back with tincture of benzoin.

Ph. Germ.

℞. Isinglass, nine drachms.

Dissolve in water, and add hot filtered mixture of

Alcohol (0.921), twelve fl. ounces.
Tincture of benzoin, two fl. ounces.

Apply this to strained silk, till six coats are given, permitting each to dry before applying another, then brush over twice with a mixture of

Tincture of benzoin, six fl. ounces.
Liquid turpentine, four ounces.

Virey.

℞. Isinglass, one ounce.
Water, two fl. ounces.

Mix, and allow to stand till the isinglass is quite soft, then add

Rectified spirit, three fl. ounces and a half,

mixed with

Water, one fl. ounce and a half.

Expose to heat of water-bath till dissolved, and apply to oiled silk, nailed to a board, by means of a soft brush; apply four coats.

Liston.

℞. Fasten a piece of fine muslin, linen, or silk, to a flat board, and give it a thin coat of flour paste; over this, when dry, two coats of colorless gelatine are to be applied. Said to be superior to the usual court-plaster.

Deschamps.

℞. To one quart of jelly (obtained by boiling two beef's feet in sufficient water to cover them, and removing the fat from the surface), add one ox-gall; boil, and strain through a coarse cloth. Then add, while warm, two fl. ounces of laudanum, and the same quantity of tincture of camphor. Stir well together, and apply the composition to silk stretched on frames, two or three times with a paint brush, and carefully dry. This is far less apt to irritate the skin than common court-plaster.

Bullock.

Diamond Cement.

℞. Isinglass, softened in water, and dissolved in the smallest quantity of diluted alcohol,
Of the solution, two ounces.
Ammoniac, ten grains,

and whilst still liquid, add

Solution of mastic, made with half a drachm, in three drachms of alcohol.

Stir well together. *Redwood.*

IGNATIA.

Bean of St. Ignatius.

The seed of *Strychnos Ignatia* (*Ignatia amara*), a shrub or small tree, which is a native of the Philippine Islands, and has been transplanted to Cochin China and other parts of the East Indies.

Sex. Syst. Pentand. monog. *Nat. Syst.* Loganiaceæ.

The seeds are about an inch long, ovate, angular, and variously flattened, very hard, of a purplish-black or grayish color externally, and dark gray or brownish and somewhat diaphanous within. They are inodorous, and have a very bitter taste, which is due to the alkaloids brucia and strychnia, of the latter of which they contain a larger proportion (about twice as much) than is contained in nux vomica. They have the same properties and are employed for the same purposes as nux vomica, but require a smaller dose. Ignatia is given in the form of extract and tincture.

Extract of Ignatia.

℞. Ignatia in powder, No. 60, twelve troyounces.
Alcohol, sufficient.

Moisten powder with four fl. ounces of alcohol, press firmly into a cylindrical percolator, and obtain three pints of percolate. Distil to half a pint, and evaporate this to the proper consistence. *U. S. Ph.*

Dose, one-eighth to half a grain.

Tincture of Ignatia.

℞. Ignatia, in coarse powder, four troyounces.

Moisten with two fl. ounces of water and heat in a corked bottle until the powder is swollen; then add half a pint of alcohol and digest for three hours; pack in a percolator and slowly displace one pint. Or,

℞. Extract of Ignatia, half a troy-ounce.
Alcohol, one pint.

Dissolve. Dose, ten to fifteen drops.
Procter.

Alkaline Tincture of Ignatia.

℞. Rasped Ignatia, five hundred parts.
Carbonate of potassium, five parts.
Soot, one part.
Alcohol, 60 per ct., one thousand parts.

Digest for ten days, express, and filter. *Gouttes amères* or *Baumé's tincture.* Dose, one to eight drops. *Paris Codex.*

INDIGO.

Indigo.

A tinctorial material, obtained from several species of *Indigofera.* It is found in commerce in the form of small, solid, brittle masses, having scarcely any taste or odor, of a deep blue color, but assuming a coppery lustre when rubbed. It is principaliy used in the arts, but has also been employed as a remedial agent, in various spasmodic diseases. The dose is about a scruple, two or three times a day, rapidly increased to a drachm or more.

Powder of Indigo.

℞. Powdered indigo, half an ounce.
Aromatic powder, half a drachm.

Mix. A teaspoonful, three times a day, in epilepsy. *Radius.*

Electuary of Indigo.

℞. Powdered indigo, half an ounce.
Aromatic powder, half a drachm.
Syrup, one fl. ounce.

Mix. To be taken in divided doses, during the day. *Phœbus.*

Pills of Indigo.

℞. Powdered indigo, seventy-five grains.
Assafetida, fifteen grains.
Castor, seven grains.

Mix, and form twenty pills. One every hour. *Podreca.*

Sulphate of Indigo.

℞. Indigo, Bengal, in powder, four ounces.
Sulphuric acid, twenty-four ounces.

Dissolve by maceration and agitation, and add water until the solution measures four pints.

INULA.

Elecampane.

The root of *Inula helenium,* a large herbaceous plant, a native of Europe, and cultivated in gardens in this country, where it has also become naturalized in some places.

Sex. Syst. Syngen. super. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 881. Griffith, Med. Bot. 397.

The root is thick, fleshy, and branched. As dried and found in the shops, it is in slices of a yellowish-gray color, with a peculiar and aromatic odor, and an unpleasant, bitterish taste, with an after-sensation of pungency. It is tonic and expectorant, and also acts in some cases as a diuretic and diaphoretic. The dose of the powder is from a scruple to a drachm.

Decoction of Elecampane.

℞. Elecampane root, half an ounce.
Water, one pint.

Boil. Dose, a fl. ounce every hour or two.
Wood.

Compound Pills of Elecampane.

℞. Extract of elecampane, one drachm.
Powdered foxglove,
" ipecacuanha,
each, ten grains.
Opium, five grains.

Beat into mass, and form pills of two grains. One every hour in chronic catarrh.
Heim.

Extract of Elecampane.

℞. Elecampane root, at will.

Exhaust with diluted alcohol, and evaporate to the proper consistence. Dose, ten to thirty grains. *Ph. Germ.*

Mixture of Elecampane.

℞. Extract of elecampane, two drachms.
Antimonial wine, one fl. ounce.
Syrup of orange flowers, half a fl. ounce.

Mix. Dose, twenty to thirty drops, every three hours, in asthma and chronic catarrh. *Jahn.*

Compound Oxymel of Elecampane.

℞ Elecampane root, one ounce.
Orris root, half an ounce.
Water, thirty-six fl. ounces.

Boil down to two-thirds, strain, and add

Honey, sixteen ounces.
Ammoniac, one ounce.
Vinegar, eight fl. ounces.

Evaporate to the consistence of honey. A spoonful occasionally, in catarrh and humid asthma. *Spielmann.*

IODINIUM.

Iodine.

Iodine is an elementary non-metallic body, having many of the properties of chlorine. It exists in many marine vegetables and animals, and also in some mineral bodies and salt springs; but is principally obtained from kelp, or the ashes of seaweeds. It is soft, friable, and opaque; of a bluish-black color and metallic lustre, and has a strong and penetrating odor, and an acrid taste. It is employed as a stimulant or alterant in morbid actions of the absorbent and glandular systems, both externally and internally, and, in overdoses, acts as an irritant poison.

The dose, in substance, is from the eighth of a grain to a grain.

Pills of Iodine.

℞ Iodine, six grains.
Extract of gentian, one drachm.
Mucilage of gum Arabic, sufficient.

Mix, and form twenty-four pills. These are said to be useful in mercurial or scorbutic salivation. *Radius.*

Tincture of Iodine.

℞ Iodine, one troyounce.
Alcohol, one pint.

Dissolve. *U. S. Ph.*

Sixteen minims, or thirty-five drops, contain one grain of iodine. Dose, from ten to twenty drops, three times a day; to be increased.

℞ Iodine, one part.
Alcohol, ten parts.

Dissolve. This is nearly a saturated tincture. *Ph. Germ.*

Saturated Tincture of Iodine.

℞ Iodine, two scruples.
Alcohol, one fl. ounce.
Compound spirit of lavender, two fl. drachms.

Mix. Five to ten drops, twice a day, gradually increasing. In amenorrhœa, leucorrhœa, gonorrhœa, etc. *Durand.*

Decolorized Tincture of Iodine.

℞ Iodine, Hyposulphite of sodium, Distilled water, each, ten parts.

Make a solution at a moderate heat; add

Spirit of ammonia, sixteen parts.

Agitate for a few moments, and add

Alcohol, seventy-five parts.

Set in a cool place for three days, and filter. Colorless, with a slight ammoniacal odor. *Ph. Germ.*

Compound Tincture of Iodine.

℞ Iodine, half a troyounce.
Iodide of potassium, one troyounce.
Alcohol, one pint.

Dissolve. Dose, five to fifteen drops, as may be required. *U. S. Ph.*

℞ Iodine, half an ounce.
Iodide of potassium, one quarter ounce.
Alcohol (imp. meas.), one pint.

Dissolve. *Brit. Ph.*

This is the tincture of iodine of *Brit. Ph.*, and is considerably weaker than the preceding. Dose, ten to twenty minims.

Ethereal Tincture of Iodine.

℞ Iodine, two scruples.
Sulphuric ether, one fl. ounce and a half.

Dissolve, and filter. *Magendie.*

℞ Iodine, six grains.
Sulphuric ether, two fl. drachms.

Dissolve. Dose, ten drops, two or three times a day, much diluted. In diseases of the skin or glands. *Ellis.*

℞ Iodine, at will.
Sulphuric ether, sufficient

to make a saturated solution. This is very useful as a counter-irritant, and is applied by a camel-hair pencil. The part is then to be covered with a pledget of lint to check evaporation. *R. Thomson.*

Mixture of Iodine and Iodide of Potassium.

℞. Iodine, three grains.
Iodide of potassium, six grains.
Distilled water, one fl. ounce.

Dissolve. Dose, six to twenty drops, thrice a day, in a draught of cold water. In glandular diseases and affections of the mucous membranes. *Morton.*

Compound Solution of Iodine.

℞. Iodine, six drachms.
Iodide of potassium, a troyounce and a half.
Distilled water, a pint.

Dissolve. *U. S. Ph.*

℞. Iodine, twenty grains.
Iodide of potassium, thirty grains.
Distilled water, one fl. ounce.

Dissolve. Officinal under the name of *Solution of Iodine.* *Brit. Ph.*

Bath with Iodine.

For adults.	1.	2.	3.
℞. Iodide of potassium,	231 grs.	308 grs.	370 grs.
Iodine,	123 "	154 "	184 "
Water,	twenty fl. ounces.		

Dissolve, and add to bath of sixty gallons.

For children.			
℞. Iodide of potassium,	77 grs.	92 grs.	107 grs.
Iodine,	38 "	46 "	61 "
Water,	ten fl. ounces.		

Dissolve, and add to bath of sixty gallons. Used in scrofulous affections. *Lugol.*

Solution of Iodine.

For internal use.	1.	2.	3.
℞. Iodine,	½ gr.	⅔ gr.	1 gr.
Common salt,	12 grs.	12 grs.	12 grs.
Distilled water,	Oj.	Oj.	Oj.

For external use.			
℞. Iodine,	2 grs.	3 grs.	4 grs.
Distilled water,	Oj.	Oj.	Oj.

As a lotion. *Lugol.*

Inhalation of Iodine.

℞. Tincture of iodine (*Brit. Ph.*), one fl. drachm.
Water, one fl. ounce.

Mix; apply a gentle heat, and let the vapors be inhaled. *Brit. Ph.*

℞. Compound solution of iodine, ten to forty drops.
Distilled water, one fl. ounce.

Mix. Used with an atomizer in chronic bronchitis. *Solis Cohen.*

℞. Iodine, twenty grains.
Chloroform, one fl. ounce.

Dissolve. Forty drops to be inhaled at night. *Dutcher.*

Liniment of Iodine.

℞. Iodine, one ounce and a quarter.
Iodide of potassium, half an ounce.
Camphor, one quarter ounce.
Rectified spirit, ten fl. ounces.

Dissolve. *Brit. Ph.*

Lotion of Iodine.

℞. Tincture of iodine, half a fl. ounce.
Iodide of iron, twelve grains.
Chloride of antimony, half an ounce.

Mix. As an application to corns, by means of a camel's-hair pencil, after the corn has been pared. *Henderson.*

℞. Tincture of iodine, one fl. drachm.
Black drop, two fl. drachms.
Oil of almonds,
Lime water, each, two fl. ounces.

Mix carefully. As a lotion for chilblains. *Cadet.*

℞. Iodine, one or two grains.
Alcohol, one fl. drachm.
Water, one pint.

Mix. To wash scrofulous ulcers. *Foy.*

Collyrium of Iodine.

℞. Iodide of potassium, twenty-five grains.
Iodine, one grain.
Rose water, eight troyounces.

Dissolve. In scrofulous affections of the eye. *Magendie.*

Mixture of Iodine.

℞. Tincture of iodine, ninety drops.
Decoction of Peruvian bark, ten fl. ounces.

Mix. Two spoonfuls, three times a day. *Radius.*

℞. Tincture of iodine, ten drops.
Water of soapwort, four fl. ounces.
Syrup of orange-flowers, one fl. ounce.

Mix. In spoonful doses. In the treatment of scrofulous ulcers. *Foy.*

Syrup of Iodo-tannin.

℞ Iodine, one part.
Tannin, six parts.
Distilled water, one hundred parts.

Dissolve and evaporate to twenty parts, filter, and, to every sixty parts of the solution, add enough syrup to make one thousand parts. *Demolon.*

Dose, a tablespoonful, in scrofulous affections, leucorrhœa, etc. Guilliermond has published a similar formula, containing three-fifths the above amount of iodine, and substituting extract of rhatany in place of the tannin.

Clyster of Iodine.

℞ Gum Arabic, four drachms.
Water, six fl. ounces.

Dissolve, and add

Tincture of iodine, five drops.

In amenorrhœa, dysmenorrhœa, etc. *Cadet.*

Gargle of Iodine.

℞ Tincture of iodine, one to two fl. drachms.
Tincture of opium, one fl. drachm.
Water, six fl. ounces.

Mix. As a gargle, in ulceration of the tonsils. *Ross.*

Ointment of Iodine.

℞ Iodine, twenty grains.
Iodide of potassium, four grains.
Water, six minims.
Lard, one troyounce.

Rub the iodine and iodide with the water, and then with the lard, till thoroughly mixed. *U. S. Ph.*

In goitre, scrofulous swellings, etc.

℞ Iodine,
Iodide of potassium, each, thirty-two grains.
Proof spirit, one fl. drachm.
Prepared lard, two ounces.

Proceed as above. *Brit. Ph.*

℞ Iodine, one scruple.
Rose ointment, one ounce.

Mix. To be applied to the tonsils, night and morning, by means of a brush. Not to be used till all inflammation is subdued. *Cerchiari.*

℞ Iodine, one part.
Lard, sixteen parts.

Rub together carefully. *Guibourt.*

Compound Ointment of Iodine.

℞ Iodine, fifteen grains.
Iodide of potassium, thirty grs.
Water, thirty minims.
Lard, one troyounce.

Rub the iodine and iodide of potassium with the water, and then with the lard, till thoroughly mixed. *U. S. Ph.*

Used in same cases as the iodine ointment, but is more active.

Iodine Ointment with Oil of Tobacco.

℞ Iodine, twelve grains.
Iodide of potassium, four scruples.
Oil of tobacco, fifty drops.
Lard, two drachms.

Mix. To relax rigid muscles. *Dover.*

Iodine Ointment and Mercury.

℞ Mercurial ointment, sixteen parts.
Iodine, three parts.

Mix. In frictions, in ovarian dropsy. *Radius.*

Liniment of Iodine.

℞ Liniment of opium, one fl. ounce.
Tincture of iodine, one fl. drachm.

Mix. *Manson.*

Cataplasm of Iodine.

℞ Tincture of iodine, half fl. ounce.
Flaxseed meal, one ounce.
Oatmeal, three ounces.
Distilled water, sufficient.

Make a cataplasm. Used as an application to scrofulous tumors and goitre. *Dunglison, N. Rem.*

Iodine Plaster.

℞ Iodine, one drachm.
Iodide of potassium, one scruple.
Water, half a fl. drachm.

Triturate in a mortar, and add to

Burgundy pitch, three ounces.
Wax,
Suet, each, half an ounce.

Melt together, and triturate till well mixed.

IODOFORMUM.

IODOFORM.

℞. Water, one hundred parts.
Alcohol, thirteen parts.
Bicarbonate of sodium,
Iodine, each, ten parts.

Mix together in a flask and digest at a moderate heat in a water-bath until, after two or three hours, the liquid has lost its brown color; add iodine in small quantities as long as the brown coloration, at first produced, disappears; then cool, collect the crystals, wash and dry them. *Clary.*

By adding more carbonate of sodium, heating to 160°, and passing a rapid current of chlorine gas through the mother-liquor, an additional quantity of iodoform may be obtained. *Filhol.*

It is in yellow scaly crystals, having a saffron-like odor, insoluble in water, readily soluble in alcohol, ether, fixed and volatile oils; exposed to the air, it slowly volatilizes. It has tonic, stimulant, and alterative properties, and produces in larger doses tetanic spasms and death; locally it acts as an anæsthetic. Dose, one to three grains twice a day, best given in the form of pill.

Suppositories of Iodoform.

℞. Iodoform, in powder,
eighteen grains.
Oil of theobroma, seven drachms.

Triturate the iodoform with half a drachm of the oil, add to the remainder the oil previously melted, and make six suppositories. In indurated piles and cancer of the rectum. *Maitre.*

℞. Iodoform, in powder,
eighteen grains.
Oil of theobroma, three drachms.

Make six suppositories. In syphilitic ulcerations. *Lallier.*

Ointment of Iodoform.

℞. Iodoform, thirty or forty grains.
Simple ointment, one ounce.

Mix thoroughly. In obstinate skin diseases, and in bubo, scrofulous glandular enlargements, etc. *Glover.*

Saponated Emulsion of Iodoform.

℞. Quillaia bark, one part.
Stronger alcohol, sufficient.

Prepare four parts of tincture and saturate this with iodoform; dilute one part of this liquid with four parts of water, and agitate. A portion of the water may be substituted by glycerin.

Recommended as a convenient form for external use, and in doses of two to eight grains daily, internally. *Lebœuf.*

IPECACUANHA.

IPECACUANHA.

The root of *Cephaelis ipecacuanha*, a small herbaceous plant, a native of Brazil.

Sex. Syst. Pentand. monog. *Nat. Syst.* Rubiaceæ.

Richard, Bull. Med. iv. 92. Griffith, Med. Bot. 357.

This root is about the size of a large quill, of an irregular, twisted shape, apparently formed of small, unequal rings, about a line in height, separated by narrow interstices; when broken, it presents two distinct parts, a thin ligneous centre, and a thick cortical layer of a brownish color, and somewhat resinous appearance, having an herbaceous, sub-acrid, somewhat bitter taste, and a nauseous odor. Externally it presents some varieties of color, but is usually brown. It is emetic, and sometimes purgative in full doses, and diaphoretic and expectorant in small, but repeated quantities. As an emetic, the dose is fifteen to twenty grains; as a nauseant, two to four grains; as an expectorant, one to two grains.

Compound Powder of Ipecacuanha. (Dover's Powder.)

℞. Ipecacuanha,
Opium, each, in powder,
one drachm.
Sulphate of potassium, one ounce.

Triturate thoroughly. *U. S. Ph.*

℞. Ipecacuanha,
Liquorice root,
Extract of opium, in powder, } each, one ounce.
Sulphate of potassium,
Nitrate of potassium,
each, four ounces.

Triturate well. *Paris Codex.*

This latter formula approaches nearest to the original formula of Dover, but is not superior to the first, now generally used. Dose, five to ten grains, as a diaphoretic.

Dover's Powder (Original).

℞. Opium, one ounce.
Saltpetre,
Vitriolated tartar,
each, four ounces.
Ipecacuhan, one ounce.
Liquorice, one ounce.

"Put the saltpetre and tartar into a red-hot mortar, stirring them with a spoon until they have done flaming. Then powder them very fine. After that slice in your opium; grind these to a powder, and then mix the other powders with them."

Dover.

Powder of Ipecacuanha and Tartar Emetic.

℞. Powdered ipecacuanha, one scruple.
Tartar emetic, one grain.

Mix. As an emetic, or in divided doses, as a nauseant and sudorific. *Ellis.*

Powder of Ipecacuanha and Rhubarb.

℞. Powdered ipecacuanha,
" rhubarb, each, one scruple.

Mix. As an emeto-cathartic in full doses; or tonic alterative, in doses of three or four grains. *Beasley.*

Powder of Ipecacuanha and Chloride of Ammonium.

℞. Powdered ipecacuanha, a quarter grain.
Chloride of ammonium, twelve grains.
Extract of liquorice,
Sugar of milk, each, six grains.

Mix. To be taken every two hours, as an expectorant, on the decline of pneumonia. *Kopp.*

Powder of Ipecacuanha and Antimony.

℞. Ipecacuanha,
Golden sulphuret of antimony, each, one grain.
Camphor, three grains.
Gum Arabic, one scruple.

Triturate well. To be taken every two hours, in deficient expectoration in pneumonia. *Phœbus.*

Powder of Ipecacuanha and Carbonate of Sodium.

℞. Powdered ipecacuanha,
" opium, each, one grain.
Carbonate of sodium, twelve grains.

Mix, and rub well together. To be taken every eight hours, in spasmodic asthma, hooping-cough, etc. *A. T. Thomson.*

Powder of Ipecacuanha and Nitre.

℞. Dover's powder, one drachm.
Nitre, one ounce.

Mix. To be taken in divided doses. *Beasley.*

℞. Powdered ipecacuanha, six grains.
" nitrate of potassium, thirty grains.
" myrrh, twelve grains.

Mix, and divide into four powders; one to be taken every four hours. Found useful in asthma, and the earlier stages of phthisis. *A. T. Thomson.*

Powder of Ipecacuanha and Calomel.

℞. Powdered ipecacuanha, six grains.
" opium, three grains.
Calomel, one grain and a half.
Powdered nitre, half a drachm.

Mix, and make six powders. One, every three or four hours, as a diaphoretic. *Ellis.*

Powder of Ipecacuanha and Myrrh.

℞. Powdered ipecacuanha, six grains.
" myrrh, twelve grains.
" nitre, half a drachm.

Mix, and make four powders. One every four hours, as a stimulating expectorant. *Paris.*

Powder of Ipecacuanha and Tragacanth.

℞. Powdered ipecacuanha, five grains.
Compound tragacanth powder, ten grains.

Mix, make a powder, to be taken every four or six hours. Useful at the commencement of febrile diseases, after clearing the stomach and bowels. *A. T. Thomson.*

Extract of Ipecacuanha.

℞. Coarsely-powdered ipecacuanha, one part.
Proof spirit, six parts.

Treat by displacement; distil off the spirit, and evaporate, on water-bath, to proper consistence. *Paris Codex.*

Bolus of Ipecacuanha.

℞. Powdered ipecacuanha, two grains.
Conserve of opium, one scruple.
Prepared chalk, sufficient.

Mix, and make eight boluses. Two, night and morning, in dysentery. *St. Marie.*

℞. Powdered ipecacuanha, two grains.
Aromatic powder, ten grains.
Syrup of cinnamon, sufficient.
Mix, and make two boluses. One in the evening, in dyspepsia. *Cadet.*

Pills of Ipecacuanha and Opium.

℞. Dover's powder, three parts.
Confection of roses, one part.
Mix, and make pills of four grains each. *Ed. Ph.*

Pills of Ipecacuanha and Squill.

℞. Dover's powder, three drachms.
Powdered squill,
Ammoniac, each, one drachm.
Molasses, sufficient.
Mix, and form mass. Dose, five to ten grains, as a diaphoretic. *Brit. Ph.*

Pills of Ipecacuanha and Foxglove.

℞. Powdered ipecacuanha,
" foxglove,
each, half a drachm.
Powdered opium, five grains.
Extract of elecampane, sufficient.
Mix, and make sixty pills. One, every three hours, in spasmodic asthma. *Heim.*

Pills of Ipecacuanha and Centaury.

℞. Powdered ipecacuanha,
Extract of centaury,
each, fifteen grains.
Powdered rhubarb, half a drachm.
Mix, and make thirty pills. One, night and morning, in dyspepsia. *Radius.*

Lozenges of Ipecacuanha.

℞. Powdered ipecacuanha,
" tragacanth,
each, two drachms.
Powdered arrowroot,
two troyounces.
" sugar, eight troyounces.
Syrup of orange-peel, sufficient.
Mix the powders thoroughly, form into a mass with the syrup, and divide into four hundred and eighty troches. *U. S. Ph.*
Dose, one to three.
A good expectorant in catarrh. Each contains a quarter of a grain of ipecacuanha.
The lozenges of *Brit. Ph.* contain the same amount of ipecac, but weigh about seventeen grains each; those of *Ph. Germ.* weigh one gramme, and contain one-thirteenth of a grain of ipecacuanha.

Lozenges of Ipecacuanha and Camphor.

℞. Powdered ipecacuanha,
fifteen grains.
" camphor,
" sugar, each, one drachm.
Mucilage of tragacanth, sufficient.
Mix, and make sixty lozenges. *Beasley.*

℞. Powdered sugar,
five hundred parts.
Flake manna, one hundred and twenty-five parts.
Powdered ipecacuanha,
eighteen parts.
Lactucarium, eight parts.
Powdered squill, four parts.
Mucilage of tragacanth, sufficient.
Make into a uniform paste, and divide into lozenges of ten grains. Five or six a day, in catarrh, etc. *Grunn.*

Confection of Ipecacuanha.

℞. Powdered ipecacuanha,
twelve grains.
Flowers of sulphur, one scruple.
Powdered orris, one drachm.
Syrup of mallow,
Manna, each, two ounces.
Mix. A teaspoonful, two or three times a day in hooping-cough. *Bories.*

Decoction of Ipecacuanha.

℞. Bruised ipecacuanha,
two drachms.
Water, twelve ounces.
One-third of the water is to be used at a time, so as to make three decoctions; these are to be united, and should amount to six ounces. Celebrated in dysentery; one-third to be taken at a dose. *Soubeiran.*

Fluid Extract of Ipecacuanha.

℞. Ipecacuanha, in powder,
No. 60, sixteen troyounces.
Glycerin, eight fl. ounces.
Stronger alcohol, one pint and a half.
Water, twelve fl. ounces.
Mix the alcohol and water, moisten powder with six fl. ounces of the mixture, pack firmly in a conical percolator, add remain-

ing mixture and macerate for four days. Then with diluted alcohol obtain two pints of percolate, mix with glycerin and evaporate, at or below 140°, to one pint. *U. S. Ph.*

If evaporated at a higher heat, the fluid extract is more unsightly and may become gelatinous.

The following modification of the officinal process is an improvement: mix the percolate with two fl. ounces of glycerin, evaporate at 140° to ten fl. ounces, cool, and filter, wash the filter with sufficient water to make the filtrate measure twelve fluidounces, and mix with four fluidounces of glycerin. *Amer. Journ. Ph.* 1873, Nov.

Mixture of Ipecacuanha.

℞ Powdered ipecacuanha, half a drachm.
Tartar emetic, one grain.
Tincture of squill, one fl. ounce.
Distilled water, seven fl. ounces.

Mix. Four tablespoonfuls; then two every ten minutes, till vomiting is produced. *Ellis.*

℞ Powdered ipecacuanha, five grains.
Syrup of poppies, one drachm.
Spirit of cinnamon, two drachms.
Chalk mixture, thirteen drachms.

Mix. As a draught in dysentery. *Hooper.*

℞ Powdered ipecacuanha, two grains.
Carbonate of sodium, ten grains.
Syrup of poppies, one fl. ounce.
Mint water, six fl. ounces.

Mix. In spoonfuls to check spasmodic vomiting. *St. Marie.*

℞ Ipecacuanha, one drachm.
Senna, two drachms.
Boiling water, six fl. ounces.

Infuse for twelve hours, strain, and add
Oxymel of squill,
Syrup of hyssop, each, one ounce.

Mix. In spoonfuls, in hooping-cough. *Guibourt.*

Buckler's Croup Mixture.

℞ Tartar emetic, two grains.
Powdered ipecacuanha, forty grains.
Syrup of squill, two fl. ounces.

Mix. Dose, a teaspoonful every ten minutes until it operates. *Maryland Coll. Ph.*

Syrup of Ipecacuanha.

℞ Fluid extract of ipecacuanha, two fl. ounces.
Syrup, thirty fl. ounces.

Mix. *U. S. Ph.*

℞ Ipecacuanha, in powder, No. 60, two troyounces.
Acetic acid, sixty minims.
Glycerin, eight fl. ounces.
Sugar, in coarse powder, eighteen troyounces.

Moisten powder with a little alcohol, pack firmly in a cylindrical percolator, add two fl. ounces of alcohol, then eight fl. ounces of a mixture composed of two parts of alcohol to one of water, and displace, finally, with diluted alcohol twelve fl. ounces; evaporate the first two fl. ounces of the percolate spontaneously to a syrupy consistence, and the remaining ten fl. ounces mixed with the acetic acid, carefully in a water-bath to two fl. ounces and a half. Mix the two portions, add ten fl. ounces of water, evaporate to twelve fl. ounces, cool, filter, and wash the filter with water to obtain twelve fl. ounces of liquid; in this dissolve the sugar cold or with a moderate heat, add the glycerin, and strain. *J. B. Moore.*

A tablespoonful represents fifteen grains of ipecacuanha. Dose, as an emetic for children, one to two fl. drachms; as an expectorant, five to twenty minims.

℞ Bruised ipecacuanha, one part.
Alcohol, sp. gr. 892, five parts.
Distilled water, thirty-six parts.

Digest for a day, express, filter, and add
Sugar, sixty-six parts.

Dissolve and strain. *Ph. Germ.*

This is about one-fifth the strength of the preceding.

℞ Alcoholic extract of ipecacuanha, one part.
Water, eight parts.

Dissolve, filter, and mix with
Syrup, ninety-nine parts.

Boil to the consistency of syrup. *Paris Codex.*

Compound Syrup of Ipecacuanha.

℞ Ipecacuanha, one drachm.
Orris root, two drachms.
Red Peruvian bark, half an ounce.
Seneka,
Iceland moss, each, two ounces.

Sugar, two pounds.
Boiling water, two pints.

Digest for two hours, strain, and evaporate to one pint; then add the sugar, and make a syrup. In spoonful doses, as an expectorant. *Courtois.*

℞ Syrup of ipecacuanha,
" poppies,
each, two ounces.
" orange-flowers, one ounce.
Oxymel of squill, one ounce and a half.

Mix. Two spoonfuls every hour, in hooping-cough. *Cadet.*

Tincture of Ipecacuanha.

℞ Bruised ipecacuanha, one part.
Alcohol, sp. gr. .892, ten parts.

Digest for a week, express, and filter. *Ph. Germ.*

℞ Bruised ipecacuanha, two ounces.
Spirit of nitrous ether, two pints.

Digest for eight days, and filter. Used as a diaphoretic in febrile affections. *Mettauer.*

Wine of Ipecacuanha.

℞ Fluid extract of ipecacuanha, two fl. ounces.
Sherry wine, thirty fl. ounces.

Mix, and filter. *U. S. Ph.*

℞ Ipecacuanha, bruised, one ounce.
Sherry wine, one pint (imper.).

Macerate for seven days, press, and filter. *Brit. Ph.*

℞ Ipecacuanha, bruised, one part.
Sherry wine, ten parts.

Macerate for a week, express, and filter. *Ph. Germ.*

Emetic and diaphoretic. Dose, for an adult, as emetic, one fl. ounce; for a child, one fl. drachm.

Compound Wine of Ipecacuanha.

℞ Ipecacuanha, four parts.
Sugar, two parts.
Diluted alcohol, twenty-four parts.

Digest for eight days, and add

Sherry wine, ninety-six parts.
Star anise, one part.
Sugar, four parts.

Filter at the end of six days. *Niemann.*

Wine of Ipecacuanha and Tartar Emetic.

℞ Wine of ipecacuanha, one fl. ounce.
Tartar emetic, one grain.

Mix. A teaspoonful, every ten or fifteen minutes, till vomiting is induced. *Ellis.*

Alkaline Wine of Ipecacuanha.

℞ Wine of ipecacuanha, forty minims.
Tincture of opium, eight drops.
Carbonate of sodium, sixteen grains.
Syrup, two fl. drachms.
Water, fourteen fl. drachms.

Mix. A teaspoonful, to children, in hooping-cough. *Pierson.*

Elixir of Ipecacuanha.

℞ Powdered ipecacuanha,
Balsam of tolu, each, half an ounce.
Flowers of benzoin, } each, two
Opium, } drachms.
Saffron, }
Oil of anise, one drachm.
Camphor, two scruples.
Alcohol, two pints.

Digest, express, and filter. Dose, one to two drachms, as a stimulating sudorific. *Cadet.*

IRIS FLORENTINA.

Florentine Iris. Orris.

The Florentine iris is a native of the southern parts of Europe, and affords a root, or rhizome, known as orris root.

Sex. Syst. Triand. monog. *Nat. Syst.* Iridaceæ.

Linn. Sp. Pl. 55. Griffith, Med. Bot. 625.

The rhizome is horizontal, knotty, and fragrant; in a recent state it is acrid, and somewhat bitter; this acrimony disappears in a great measure on desiccation. It is seldom used in medicine, but forms an ingredient in numerous tooth-powders, etc.

Dentifrice with Orris Root.

℞ Cream of tartar, two ounces.
Powdered orris root, one ounce.
" myrrh,
" kino, each, half an ounce.

Mix well. *Redwood.*

R. Powdered Castile soap,
" orris root,
each, two ounces.
" cuttlefish bone,
" prepared chalk,
each, three ounces.
Oil of cloves,
Essence of lemon,
each, twenty drops.
Mix. *Redwood.*

IRIS VERSICOLOR.

Blue Flag.

This is a native of the United States, where it grows in moist and swampy locations.

Sex. Syst. Triand. monog. *Nat. Syst.* Iridaceæ.

The rhizome, which is the officinal portion, is horizontal, jointed, of a brown color externally, grayish within; it has a feeble but nauseating odor, and an acrid, bitterish taste. It possesses cathartic and emetic properties. Dose, twenty to thirty grains, in the form of powder.

J.

JALAPA.

Jalap.

Jalap is the tuber of the *Exogonium purga* (*Ipomœa jalapa*), a native of Mexico.

Sex. Syst. Pentand. monog. *Nat. Syst.* Convolvulaceæ.

Coxe, Am. Journ. Med. Sci., 1830. Griffith, Med. Bot. 474.

The root, when dried, is in pieces of various forms and sizes; usually entire, but sometimes in slices. The epidermis is thin and brown; within it is grayish, with brown, concentric rings. The powder is of a brownish-yellow, with a peculiar, unpleasant odor, and a sweetish, sub-acrid, nauseous taste. It is an active purgative, in doses of ten to thirty grains.

Powder of Jalap and Calomel.

R. Powdered jalap, ten grains.
Calomel, five grains.

Mix. To be given in syrup or molasses. As a purgative. *Ellis.*

R. Powdered jalap, twelve grains.
Calomel, three grains.
Sulphate of potassium,
seven grains.

Mix. Make a powder to be taken at night; a useful purge in diminishing the action of the liver. *A. T. Thomson.*

Powder of Jalap and Cream of Tartar.

R. Powdered jalap, one drachm.
Cream of tartar, six drachms.

Mix, and divide into six powders. One every three hours, as a hydragogue purgative. *Ellis.*

R. Jalap, two ounces.
Cream of tartar, one ounce.
Sugar, thirteen ounces.
Oil of orange-peel, two drachms.

Mix. Dose, one to two drachms. *Cadet.*

R. Powdered jalap, one ounce.
Cream of tartar, two ounces.

Mix. *U. S. Ph.*

Dose, thirty grains to a drachm.

R. Powdered jalap, five ounces.
Cream of tartar, nine ounces.
Powdered ginger, one ounce.

Mix. Half a drachm to one drachm, as a hydragogue purgative. *Brit. Ph.*

The last two are called *compound powder of jalap.*

Powder of Jalap and Ipecacuanha.

R. Jalap, fifteen grains.
Ipecacuanha, five grains.
Oil of cinnamon, two drops.

Mix. *Paris.*

Powder of Jalap and Scammony.

R. Jalap, one drachm.
Scammony, one scruple.
Ipecacuanha, ten drachms.

Mix, and divide into powders of eight grains. In mucous discharges. *Dumas.*

Extract of Jalap.

R. Jalap, in powder,
No. 50, sixteen troyounces.
Alcohol, four pints.
Water, sufficient.

Moisten the jalap with three fl. ounces of alcohol and obtain by the process of displacement, first by alcohol, then by water, four pints of tincture and six pints of infusion. Distil off the alcohol from the tincture, and evaporate the infusion till both are of the consistence of thin honey, mix them, and evaporate to proper consistence. *U. S. Ph.*

Brit. Ph. exhausts the jalap by maceration, first with alcohol, afterwards with water, and proceeds as before.

Dose, from ten to twenty grains.

Resin of Jalap.

℞ Jalap, in powder, No. 60, sixteen troyounces.
Alcohol,
Water, each, sufficient.

Moisten the jalap with four fl. ounces of alcohol, pack firmly in a cylindrical percolator, add twelve fl. ounces of alcohol, and macerate for four days; then displace with alcohol until the percolating tincture ceases to produce turbidity with water. Reduce by distillation to six fl. ounces, and add it, constantly stirring, to seven pints of water. Decant the liquid when clear, wash the precipitate twice with water, by decantation, press out the water, and dry the resin by a gentle heat. *U. S. Ph.*

The process of *Brit. Ph.* is essentially the same; *Ph. Germ.* exhausts the jalap by maceration with alcohol.

Dose, two to five grains.

Alkaline Extract of Jalap.

℞ Powdered jalap, two pounds.
Alcohol (.921), one gallon.

Digest for some days, strain, and filter; evaporate slowly on the water-bath to a pilular consistence, adding gradually

Carbonate of potassium, twelve drachms.

Dose, three to nine grains. *Durand.*

Jalap Soap.

℞ Resin of jalap,
Soap, each, four parts.
Alcohol, sp. gr. .892, eight parts.

Dissolve and evaporate in a water-bath to nine parts. Dose, five to ten grains. *Ph. Germ.*

Jalap Pills.

℞ Jalap soap, three parts.
Powdered jalap, one part.

Mix, and make into pills, each weighing ten centigrammes (one grain and a half). *Ph. Germ.*

Compound Pills of Jalap.

℞ Jalap,
Rhubarb, } each, one ounce.
Aloes,
Soap, two ounces.
Syrup of ginger, sufficient.

Mix, and form mass. Dose, twenty to thirty grains. *Foy.*

Pills of Jalap and Calomel.

℞ Resin of jalap, } each, one
Calomel, } drachm.
Soap, }
Oil of orange-peel, six drops.

Mix, and make sixty pills. *Alibert.*

℞ Jalap,
Calomel, each, twelve parts.
Extract of aloes, eight parts.
Colocynth pulp, five parts.
Resin of jalap, two parts.

Mix, and divide each troyounce of the mass into three hundred pills. This is one of the many formulas for the *German* or *Kaiser pills.* *Hager.*

Electuary of Jalap.

℞ Powdered jalap,
Black sulphuret of mercury, each, two drachms.
Scammony, one drachm.
Resin of jalap,
Squill, each, one drachm and a half.
Syrup of buckthorn, sufficient.

Mix. Dose, half a drachm to a drachm, in dropsy or lead colic. *Cadet.*

℞ Powdered jalap, } each, half
Cream of tartar, } an ounce.
Nitre, }
Confection of senna, one ounce.
Simple syrup, sufficient.

Mix. A bolus the size of a hazel-nut, three or four times a day, in hemorrhoids. *Ellis.*

Emulsion of Jalap.

℞ Resin of jalap, seven and a half grains.
White sugar, one ounce.
Yolk of egg, half a one.

Water, four fl. ounces.
Orange-flower water, two fl. ounces.

Triturate the resin with a portion of the sugar, then with the yolk, and finally with the other ingredients. *Paris Codex.*

R. Resin of jalap, nine grains.
Soap, three grains.
Olive oil, one ounce and a half.

Triturate well. Said to be useful in dysentery. A tablespoonful, occasionally. *Vogel.*

Mixture of Jalap.

R. Infusion of senna, six fl. ounces.
Extract of jalap, half a drachm.
Tartrate of potassium, four drachms.
Oleoresin of ginger, twenty minims.

Mix. *Beasley.*

Tincture of Jalap.

R. Jalap, in powder, No. 60, six troyounces.
Alcohol,
Water, each, sufficient.

Obtain by percolation two pints of tincture, using a mixture of two measures of alcohol with one of water. *U. S. Ph.*

The tincture of *Brit. Ph.* is of about the same strength, two and a half ounces of jalap and alcohol, sp. gr. .920, being used to obtain one imperial pint of tincture.

Seldom given alone, but added to cathartic mixtures, in portions of one to two fl. drachms.

Tincture of Jalap Resin.

R. Resin of jalap, one part.
Alcohol, ten parts.

Dissolve. *Ph. Germ.*

Compound Tincture of Jalap.

R. Jalap, eight ounces.
Scammony, two ounces.
Turpeth, one ounce.
Brandy, twelve pints.

Digest for twelve hours, on a water-bath, filter, and add

Syrup of senna, four pounds.

Mix. *Giordano.*

Mixture of Tincture of Jalap.

R. Tincture of jalap, two fl. drachms.
Vinegar of squill, one fl. drachm.
Mint water, one fl. ounce.

Mix. To be taken three times a day. *Ellis.*

JUGLANS CINEREA.

Butternut.

The Butternut, or White Walnut, is an indigenous tree, with numerous, nearly horizontal, branches, found in many places in the United States.

Sex. Syst. Monœc. polyand. *Nat. Syst.* Juglandaceæ.

Linn. Sp. Pl. 1415. Griffith, Med. Bot. 589.

The part used is the inner bark, especially of the root; this is fibrous, has little odor, but a bitter, somewhat acrid taste. It is, at first, white, but gradually changes to a dark brown. It is a mild cathartic, and is well suited to cases of costiveness and bowel affections. It is usually given in extract. In Europe the leaves and the rind of the green fruit of *J. regia* are employed as alteratives and vermifuges.

Extract of Butternut.

R. Butternut, in powder, No. 40, twelve troyounces.
Water, sufficient.

Mix the butternut with four fl. ounces of water, pack into a percolator, and exhaust. Boil the liquid to three-fourths of its bulk, strain, and evaporate to proper consistence. *U. S. Ph.*

Dose, from five to ten grains, as a laxative; from twenty to thirty, as a purgative.

JUNIPERUS.

Juniper.

The common Juniper, *J. communis*, is an erect, evergreen shrub, sometimes attaining a large size, found in Europe and Northern Asia and America. The tops and the berries are officinal.

Sex. Syst. Dicœc. monadelph. *Nat. Syst.* Pinaceæ.

Linn. Sp. Pl. 1470. Griffith, Med. Bot. 608.

The berries are oblong globular, marked with three radiating furrows at top, and contain three seeds. They are of a purplish-black color, have a sweetish, somewhat terebinthinate taste, and a peculiar, aromatic odor. They are used as stimulating diuretics, especially as adjuvants to more active remedies. The tops have a balsamic odor, and a resinous, bitterish taste, with the same medicinal properties as the berries.

Extract of Juniper.

℞. Bruised juniper berries, one part.
Hot water, four parts.

Macerate until cold, express gently, let subside, strain, and evaporate to the consistence of a thin extract. Dose, one to three drachms. *Ph. Germ.*

Infusion of Juniper.

℞. Juniper berries, bruised, one troyounce.
Boiling water, one pint.

Macerate for an hour, and strain. To be taken during the twenty-four hours. *U. S. Ph.*

Compound Infusion of Juniper. (Cider Mixture.)

℞. Juniper berries, bruised, } each,
Mustard seed, } half an
Ginger, } ounce.
Horseradish, bruised,
Parsley root, bruised, each, one ounce.
Cider, two pints.

Infuse, and strain. A wineglassful, two or three times a day, in general dropsy. *Parrish.*

℞. Juniper berries, bruised, one ounce and a half.
Boiling water, one pint.

Infuse in a close vessel for two hours, strain, and add

Cream of tartar, one ounce.

Mix. A teacupful, several times a day, with forty drops of sweet spirit of nitre. In dropsy. *Ellis.*

℞. Juniper berries, bruised, two ounces and a half.
Boiling water, one pint.

Infuse for two hours, and strain; add

Compound spirit of juniper, ten fl. drachms.

Dose, two fl. ounces, three times a day. *Beasley.*

℞. Juniper berries, bruised, four ounces.
Boiling water, twelve fl. ounces.
Holland gin, four fl. ounces.

Mix, and macerate for twelve hours; then throw on a cotton cloth, and express. Then let sufficient water be added to the dregs, and pressed out to make a pint. The advantages of this preparation are greater strength and permanency. *W. Procter, Jr.*

Electuary of Juniper.

℞. Extract of juniper,
Clarified honey, each, one pound.
Juniper berries, } each,
Cinnamon, } half an ounce.
Orange-peel, }

Mix. Stomachic and diuretic. Dose, one to four drachms. *Saxon Ph.*

Mixture with Oil of Juniper.

℞. Oil of juniper, half a drachm.
Spirit of nitrous ether,
Tincture of foxglove, each, three drachms.

Mix. Twenty to thirty drops every three hours. *Hufeland.*

℞. Oil of juniper, twenty-five drops.
Sugar,
Gum Arabic, each, two drachms.
Distilled water, four fl. ounces.

Mix. A tablespoonful, every hour or two, as a diuretic. *Ellis.*

Spirit of Juniper.

℞. Oil of juniper, one fl. ounce.
Stronger alcohol, three pints.

Dissolve. *U. S. Ph.*

Brit. Ph. directs alcohol of .920 sp. gr. and the proportions 1 : 49.

℞. Bruised juniper berries, one part.
Alcohol,
Water, each, three parts.

Macerate for a day, and distil four parts. *Ph. Germ.*

Compound Spirit of Juniper.

℞. Juniper berries, bruised, one pound.
Caraway, bruised,
Fennel, bruised, each, one ounce and a half.
Diluted alcohol, one gallon.
Water, two pints.

Macerate in the alcohol for twenty-four hours, add the water, and, with a slow fire, distil one gallon. *U. S. Ph.* 1840.

℞. Oil of juniper, one fl. drachm and a half.
" caraway,
" fennel, each, ten minims.
Alcohol, five pints.
Water, three pints.

Dissolve the oils in the alcohol, and mix with the water. *U. S. Ph.*

Dose, two to four fl. drachms, as an addition to diuretic mixtures, etc., in debilitated cases of dropsy.

Liniment of Juniper.

℞ Oil of juniper, one ounce and a half.
Oil of anise, six drops.
Lard, two ounces.

Mix well; as an application in tinea capitis. *Sully.*

℞ Spirit of juniper, two ounces.
Oil of cloves,
Concrete oil of nutmeg, each, half a drachm.

Mix. As a friction in ecchymosis, and indolent tumors. *Augustin.*

JUNIPERUS OXYCEDRUS.

Cade Juniper.

The cade juniper is a shrub growing in southern Europe and Asia. The wood, which is resinous and of an agreeable, somewhat terebinthinate odor, is used for obtaining the empyreumatic oil, known as *oil of cade*, which is made principally in the south of France, and has a brownish-black color, and a disagreeable tar-like odor.

Sex. Syst. Dicœc. monadelph.
Nat. Syst. Pinaceæ.

Oil of cade is employed in medicine externally, for the cure of cutaneous diseases.

Tincture of Oil of Cade and Soft Soap.

℞ Oil of cade, Soft soap, Alcohol, each, one ounce.
Oil of lavender, one fl. drachm.

Dissolve. *Tilb. Fox.*

JUNIPERUS VIRGINIANA.

Red Cedar.

The tops of the red cedar are officinal. This is an evergreen tree, sometimes attaining a great size, with small, fleshy, closely imbricated leaves. It is found in all parts of the United States, but is most abundant and vigorous in the South.

Sex. Syst. Dicœc. monadelph. *Nat. Syst.* Pinaceæ.

Linn. Sp. Pl. 1471. Griffith, Med. Bot. 609.

The leaves or tops have a peculiar and somewhat aromatic odor, a bitterish and somewhat acrid taste. They have much the same properties as those of savine, but are not as active, though often used as a substitute for them.

Cerate of Red Cedar.

℞ Powdered red cedar leaves, one ounce.
Resin cerate, six ounces.

Mix the powder with the cerate previously softened. Used as a substitute for savine cerate, but is much less effectual. *Wood.*

K.

KINO.

Kino.

This is an extract obtained from several different plants, but that most used and esteemed is the product of *Pterocarpus marsupium*, a large tree, indigenous to some parts of India.

It is usually in small, angular fragments, of a dark, brownish-black color, opaque and shining; of a brittle and friable consistence, an astringent and slightly bitter taste; adhering to the teeth when chewed, and tinging the saliva of a red color. It is a powerful astringent, and much used in the treatment of mucous discharges, etc., and as a local application in gonorrhœa, to indolent ulcers, relaxed uvula, etc. The dose in powder is from ten to thirty grains.

Compound Powder of Kino.

℞ Powdered kino, fifteen parts.
" opium, one part.
" cinnamon, four parts.

Mix thoroughly. *Brit. Ph.*

Dose, five to twenty grains.

As an anodyne astringent, in diarrhœa and hemorrhage of the bowels.

℞ Powdered kino,
Sugar of milk, each, one scruple.

Mix. To be taken every three or four hours, in cardialgia. *Radius.*

Compound Pills of Kino.

℞ Powdered kino, one scruple.
" opium, two grains.
Mucilage of gum Arabic, sufficient.

Mix, and make four pills. One, every four hours, in diarrhœa, pyrosis, etc. *Ellis.*

℞ Powdered kino, two scruples.
" camphor, thirty grains.
Aromatic powder, one scruple.
Oxide of zinc, ten grains.
Mucilage of gum Arabic, sufficient.

Mix, and make twenty pills. Two, morning and evening, in diabetes. *Augustin.*

Electuary of Kino.

℞ Powdered kino, six drachms.
" alum,
" cinnamon,
each, two drachms.
Syrup, sufficient.

Mix into an electuary. One drachm, two or three times a day, in diarrhœa, chronic dysentery, etc. *Swediaur.*

Infusion of Kino.

℞ Kino, two drachms.
Boiling water, eight fl. ounces.

Infuse, and strain when cool. Dose, a fl. ounce. *Wood.*

Injection of Kino.

℞ Kino, one to two drachms.
Alum, twenty to thirty grains.
Boiling water, two pints.

Infuse for an hour, and strain. As an injection in chronic urethritis. *Swediaur.*

Syrup of Kino.

℞ Kino, two ounces.
Tepid water, three pints.

Dissolve, and add

Sugar, four pounds.

Clarify, and evaporate to consistence of syrup. *Taddei.*

Tincture of Kino.

℞ Powdered kino, one part.
Alcohol, five parts.

Macerate for a week, and filter. *Ph. Germ.*

℞ Powdered kino, two ounces.
Rectified spirit, one pint (imp.).

Macerate for seven days, and filter. *Brit. Ph.*

℞ Powdered kino, six drachms.

Mix the kino with an equal bulk of sand, introduce into a percolator, and with a mixture of two measures of alcohol with one of water, obtain eight fl. ounces of tincture. *U. S. Ph.*

Dose, one to two fl. drachms, generally as an adjuvant to astringent mixtures.

KRAMERIA.

Rhatany.

The roots of several species of Krameria are possessed of analogous properties, but the only one that is officinal is that of *K. triandra*, a small shrub found in Peru, in dry, sandy places. The stem is procumbent, and much branched, with sessile, hairy leaves, and dark red flowers. The root is long and branching.

Sex. Syst. Tetrand. monog. *Nat. Syst.* Polygalaceæ.

Ruiz & Pavon, Fl. Per. i. 93. Griffith, Med. Bot. 227.

The dried root is of a dark, reddish-brown color, with no odor, but a bitter and astringent taste. The small roots are the most powerful. It is somewhat tonic, and powerfully astringent. It is used for most purposes to which the vegetable astringents are applied. The dose in powder is from twenty to thirty grains.

Compound Powder of Rhatany.

℞ Extract of rhatany,
Catechu, each, ten grains.
Alum, four grains.
Powdered liquorice, ten grains.

Mix. To be taken three or four times a day, in diarrhœa, etc. *Vogt.*

Dentifrice of Rhatany.

℞ Extract of rhatany, one to two drachms.
Myrrh, one drachm.
Powdered orris, six drachms.
Oil of cinnamon, two drops.
" myrrh, ten drops.
Balsam of Peru, ten grains.

Mix well. *Phœbus.*

Extract of Rhatany.

Prepared like extract of gentian, by percolation with cold water. *U. S. Ph., Brit. Ph., Ph. Germ.*

Dose, ten to twenty grains.

Fluid Extract of Rhatany.

℞. Rhatany, in powder,
No. 60, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Moisten the powder with four fl. ounces of the mixed liquids, pack firmly in a glass percolator, add the remainder of the liquid, and macerate for four days. Then, with diluted alcohol, percolate twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with the reserved portion. *U. S. Ph.*

Pills of Rhatany.

℞. Extract of rhatany, one scruple.
Powdered kino, sufficient.

Mix, and make eight pills. One, every hour or two, to check mucous discharges. *Ellis.*

℞. Extract of rhatany, one drachm.
" rhubarb, two scruples.
Ginger, one scruple.

Mix, and make twenty-four pills. *Reece.*

Electuary of Rhatany.

℞. Powdered rhatany, one ounce.
" ginger, one drachm.
Syrup of orange-peel, sufficient.

Mix. A teaspoonful every two or three hours. *Ferrara Ph.*

Infusion of Rhatany.

℞. Krameria, in powder,
No. 40, one troyounce.
Water, sufficient.

Obtain by percolation one pint. *U. S. Ph.*

℞. Bruised rhatany, half an ounce.
Boiling water, ten fl. ounces.

Infuse for four hours, and strain. *Brit. Ph.*

Dose, one to two fl. ounces.

Collutory of Rhatany.

℞. Extract of rhatany, half a drachm.
Mucilage of quince seed, two drachms and a half.
Sage water, one ounce and a half.

Mix. As a mouth-wash in aphthæ, etc. *Radius.*

Clyster of Rhatany.

℞. Extract of rhatany, one scruple.
Mucilage of quince seed, three drachms.
Infusion of sage, one fl. ounce and a half.

Mix. To check diarrhœa, etc. *Ammon.*

Injection of Rhatany.

℞. Extract of rhatany, half an ounce.
Tincture of catechu,
" kino,
each, one drachm and a half.

To be added to a decoction of
Rhatany, ten drachms,
Water, three pints,
reduced to two-thirds, and strained. As an injection in leucorrhœa, and prolapsus of the uterus. *Cadet.*

Mixture of Rhatany.

℞. Extract of rhatany, one part.
Water, twenty parts.
Syrup of quinces, ten parts.

Dissolve and mix. *Paris Codex.*

℞. Extract of rhatany, one drachm.
Syrup of poppies,
Rose water, each, two fl. ounces.

Mix. A teaspoonful occasionally, in passive hemorrhage and chronic dysentery. *Fouquieur.*

℞. Extract of rhatany, one drachm.
Chamomile water, six fl. ounces.
Elixir of vitriol, half a drachm.

Mix. As the last. *Hildebrand.*

Syrup of Rhatany.

℞. Rhatany, in powder,
No. 50, sixteen troyounces.
Sugar, thirty troyounces.
Water, sufficient.

Mix the rhatany with half a pint of water, macerate for two hours, and obtain by percolation four pints of infusion; evaporate in a water-bath to seventeen fl. ounces, dissolve the sugar, and strain. Or,

℞. Fluid extract of rhatany, twelve fl. ounces.
Syrup, twenty-four fl. ounces.

Mix. *U. S. Ph.*

Forty parts of syrup contain one part of extract of rhatany. *Paris Codex.*

Tincture of Rhatany.

℞. Powdered rhatany, six troyounces.
Diluted alcohol, sufficient.

Obtain by displacement two pints. *U. S. Ph.*

The tinctures of *Ph. Germ.* and *Paris Codex* are nearly of same strength.

℞. Powdered rhatany, two and a half ounces.
Proof spirit, sp. gr. .920, sufficient.

Obtain by maceration and percolation, one imperial pint. *Brit. Ph.*

Dose, one to two fl. drachms.

Compound Ointment of Rhatany.

℞. Burgundy pitch, eight parts.
Venice turpentine, two parts.
White wax, one part.
Extract of rhatany, two parts.
Alum, one part.

Melt the first three ingredients over a gentle fire, and add the rhatany and alum, in fine powder, and incorporate well.

Useful where an astringent application is indicated.

L.

LAC.

Milk.

The milk of several animals has been used medicinally, but that generally employed is from the cow. It is mostly employed in the form of whey, and of sugar of milk.

Simple Whey.

℞. Milk, two hundred parts.
Prepared rennet, one part.

Heat together to 120° till a uniform curd is formed, and strain. A good diluent in febrile affections; when boiled down to one-half it is nutritive. *Ph. Germ.*

Clarified Whey.

℞. Milk, one litre.

Boil, and add sufficient tartaric acid, dissolved in eight parts of water, to coagulate; strain with expression, mix the whey with one-half of the white of an egg, previously beaten with a little cold water, heat again to boiling, strain, and pass through a moistened filter. *Paris Codex.*

Vinegar Whey.

℞. Milk, one pint.
Vinegar, half fl. ounce.

Boil a few minutes, and separate the curd. *Ellis.*

Tamarind Whey.

℞. Boiling milk, one hundred parts.
Tamarinds, four parts.

Boil till coagulation is effected, and strain. *Ph. Germ.*

Cream of Tartar Whey.

℞. Boiling milk, one hundred parts.
Cream of tartar, one part.

Boil until the curd separates, and strain. *Ph. Germ.*

Alum Whey.

℞. Boiling milk, one hundred parts.
Alum, one part.

Proceed as above. A glassful occasionally, in passive hemorrhages. *Ph. Germ.*

Aromatic Alum Whey.

℞. Powdered alum, one drachm.
Sugar of milk, half a drachm.
Powdered cinnamon, fifteen grains.
Milk, two pints.

Boil, and strain when coagulated. In passive uterine hemorrhages. To be taken during the day. *Niemann.*

Mustard Whey.

℞. Bruised mustard seed, half an ounce.
Milk, one pint.

Boil till the milk is coagulated, and strain. A cupful, as a diuretic, in dropsical affections. *A. T. Thomson.*

Wine Whey.

℞. Boiling milk, half a pint.
White wine, one to two fl. ounces.
Sugar, sufficient.

Boil for ten minutes, constantly stirring,

then strain. A good mode of giving wine as a stimulant. Dose must depend on circumstances. *Ellis.*

Powder of Milk.

℞ Milk, two pints.
Powdered carbonate of sodium, half a drachm.
Water, one fl. ounce.
Sugar, one pound.

Dissolve the soda in the water, add the solution to the milk, gently heat, and stir. When evaporated to one-third, add the sugar gradually, and stir. Remove from fire, pour into plates, and dry in an oven. When dry, powder, and keep in well-stopped bottles. One to two ounces, mixed with a quart of water, forms an agreeable drink, and is a good substitute for milk. *Legrip.*

Artificial Goats' Milk.

℞ Fresh suet, one ounce.

Cut in small pieces, and tie in a muslin bag, and boil in

Milk, two pints.
Sugar candy, two drachms.

A good diet in scrofulous emaciation, and in latter stages of phthisis. *A. T. Thomson.*

Mixture of Milk and Suet.

℞ Sheep's suet, two ounces.
Milk, one pint.
Starch, half an ounce.

Boil slowly for half an hour. As a drink, in dysentery and cholera infantum. *Ellis.*

Milk and Soda Water.

℞ Milk, a teacupful.

Heat nearly to boiling, and add

Sugar, a teaspoonful.

Put in a large tumbler, and add

Soda water, sufficient.

A good mode of taking milk when there is much acidity of stomach. *A. T. Thomson.*

Syrup of Milk.

℞ Skimmed milk, twelve pounds.

Evaporate to one-half, and add

Sugar, nine pounds.
Cherry-laurel water, three ounces.

Guibourt.

China Cement.

℞ Curd of milk, dried and powdered, ten ounces.
Quicklime, powdered, one ounce.
Camphor, two drachms.

Mix, and keep in closely-stopped bottles. When used, a portion is to be mixed with a little water into a paste, to be applied quickly. Used to cement broken glass, china, etc. *Cooley.*

LACCA.

Lac

Is a resinous substance obtained from several kinds of East Indian plants, but particularly from the *Croton lacciferum.* Many varieties are known in commerce, but the principal are seed, shell, and stick lac, of which the purest is the shell. This is in thin fragments of various shades of yellow, or reddish color; brittle, inodorous, and insipid. It is somewhat astringent, and was formerly used in medicine, but is now mainly employed in the arts, for the manufacture of varnishes, sealing wax, etc.

White or Bleached Lac.

℞ Shell lac, at will.

Boil in solution of potassa, pass chlorine gas through the solution, and malaxate in hot water. *Redwood.*

Aqueous Solution of Lac.

℞ Shell lac, five ounces.
Borax, one ounce.
Water, one pint.

Boil together, and strain. Used as a varnish, or a vehicle for colors. Mixed with lampblack, it forms an ink that will resist the action of acids. *Cooley.*

Cement of Shell Lac.

℞ Shell lac, at will.
Alcohol, sufficient

to make a solution of the consistence of molasses. Exceedingly tenacious. *Cooley.*

Red Sealing Wax.

℞ Shell lac, two pounds.
Venice turpentine, one pound.
Vermilion, or best dichromate of lead, one pound and a half.

Melt the lac and turpentine together, and stir in the vermilion. *Gray.*

The other colored waxes are made in the same manner, using the appropriate pigment.

LACTUCA CANADENSIS.

Wild Lettuce.

L. canadensis or *elongata* is an indigenous, herbaceous perennial, from three to six feet high, with pale yellow flowers, growing in woods and fertile soils.

Sex. Syst. Syngen. æqual. *Nat. Syst.* Asteraceæ.

Willd. Sp. Pl. iii. 1525. Big. Seq. 241.

The milk juice dried has the properties of the European lactucarium, and may be given in the same doses; see *Proceed. Amer. Ph. Assoc.* 1868, 405.

LACTUCA.

Lettuce.

This well-known plant is commonly cultivated for the table as a salad. It is erect and leafy, the leaves being ovate, semi-amplexicaul, and entire or toothed; the whole abounding in a bitter, milky juice.

It is anodyne and sedative, but is seldom used in this country except in the form of the extract, or lactucarium; but is employed to fulfil many indications in Europe.

Mixture of Lettuce and Dandelion.

℞ Fresh leaves of lettuce, } each,
" root of dandelion, } three
" " chicory, } ounces.

Beat the whole into a pulp, adding, gradually,

Peppermint water, three fl. ounces.

Express, and filter. To be taken, during the day, in hypochondriasis with insomnia. *Vogt.*

Extract of Lettuce. (Thridace.)

℞ Fresh bark of the stalks of lettuce, at will.

Bruise, express the juice, clarify it, strain, and evaporate in a water-bath to a firm extract. *Paris Codex.*

℞ Flowering herb of lettuce, at will.

Bruise, express the juice, heat gradually to 130° to separate chlorophyll; heat the strained liquor to 200°, and filter from coagulated albumen; evaporate the filtrate on a water-bath to a syrupy consistence, add the chlorophyll, previously separated, and evaporate at 140° to a pilular consistence. Dose, five to fifteen grains. *Brit. Ph.*

Ph. Germ. removes chlorophyll and albumen by heat and gummy principles by adding alcohol to the concentrated juice.

Syrup of Thridace.

℞ Thridace, one part.
Water, eight parts.

Add to the filtered solution

Syrup, forty-nine parts.

Boil down to sp. gr. 1.26. *Paris Codex.*

Lactucarium.

℞ Collect the milky juice that flows from incisions made in the stalks of lettuce, and allow it to harden.

Dose, five to eight grains.

Pills of Lactucarium.

℞ Lactucarium, twelve grains.

Make six pills; one every two hours, till sleep is procured. *Ellis.*

℞ Lactucarium, twelve grains.
Conserve of elder berries,
Extract of liquorice,
each, sufficient.

Mix, and make four pills. One, every three hours, in obstinate coughs, without expectoration. *Brera.*

Mixture of Lactucarium.

℞ Lactucarium, thirty grains.
Decoction of Iceland moss, two ounces.
Mucilage, half an ounce.
Syrup, one ounce.

Mix. Two spoonfuls every two hours, in spasmodic cough, insomnia, hysteria, etc. *Brera.*

Syrup of Lactucarium.

℞ Lactucarium, one troyounce.
Diluted alcohol, sufficient.
Syrup, fourteen fl. ounces.

Rub lactucarium with enough diluted alcohol to a syrupy consistence; put into a conical percolator, cover the surface with muslin, and obtain with diluted alcohol half a pint of tincture; evaporate at or below 160° to two fl. ounces, mix with the heated syrup, and strain while hot. *U. S. Ph.*

Dose, one or two teaspoonfuls.

Alkaline Syrup of Lactucarium.

℞ Powdered lactucarium, sixty-four grains.
Carbonate of potassium, thirty-two grains.

Sugar, four ounces.
Water, sufficient.

Grind the lactucarium with the carbonate of potassium, till well mixed; add enough water to moisten completely; stand aside for twelve hours, and then slowly obtain two fl. ounces by percolation; add the sugar, and dissolve with a gentle heat. Each fl. drachm contains two grains of lactucarium. *T. S. Wiegand.*

Syrup of Lactucarium and Opium.

℞. Alcoholic extract of lactucarium, eighteen grains.
Extract of opium,
Citric acid, each, nine grains.
Orange-flower water, one troyounce.
Sugar, fifty troyounces.
Water, sufficient.

Exhaust the extract of lactucarium with hot water, cool, filter, dissolve the sugar, add the citric acid, clarify with white of egg, evaporate, and add the solution of extract of opium in the orange-flower water. The boiling syrup should have the sp. gr. 1.26, and each tablespoonful should represent one centigramme of extract of lactucarium; the finished syrup must therefore measure nearly thirty-nine fl. ounces.
Paris Codex.

Tincture of Lactucarium.

℞. Powdered lactucarium, four ounces.
Proof spirit, two pints.

Act by displacement or digestion. *Ed. Ph.*
Dose thirty minims to two fl. drachms.

Lozenges of Lactucarium.

℞. Powdered lactucarium, two drachms.
" sugar, six ounces.
" gum Arabic,
" liquorice,
each, five ounces.
Tincture of tolu, half an ounce.

Mix, and make lozenges of ten grains.
Ed. Ph.
As expectorant, in catarrhal affections.

Powder of Extract of Lettuce.

℞. Extract of lettuce, two grains.
Powdered foxglove, half a grain.
" sugar, twelve grains.

Mix. To be taken every three hours, in hydrothorax. *Hufeland.*

Mixture of Extract of Lettuce.

℞. Extract of lettuce, two scruples.
Tincture of foxglove, half an ounce.
Cinnamon water, one drachm and a half.

Mix. Thirty drops to one fl. drachm, every two hours. *Radius.*

Aromatic Tincture of Lettuce.

℞. Leaves of lettuce, one ounce.
Cinnamon, one drachm.
Alcohol,
Water, each, four fl. ounces.

Mix. Macerate for a week, express, and filter. Fifteen to thirty drops, in dropsy.
Niemann.

Water of Lettuce.

℞. Fresh lettuce, ten parts.
Water, twenty parts.

Distil off ten parts. *Paris Codex.*
Dose, half a fl. ounce to two fl. ounces.

Syrup of Lettuce.

℞. Water of lettuce, ten parts.
Sugar, twenty parts.

Make syrup. *Paris Codex.*

Mixture of Water of Lettuce.

℞. Water of lettuce,
" linden, each, two fl. ounces.
" orange flowers, two fl. drachms.
Syrup of poppies, one fl. ounce.

Mix. A spoonful every two hours. *Foy.*

LAPPA.

Burdock.

One species of this genus is officinal in our Pharmacopœia, the *Lappa minor* (*Arctium Lappa*).

Sex. Syst. Syngen. æqual. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1143. Griffith, Med. Bot. 411. (Lappa.)

This is a native of Europe, but generally naturalized in the United States. The parts used are the root and fruit. They are diaphoretic and diuretic, especially the latter. Dose, half a drachm to a drachm.

Infusion of Burdock.

℞. Burdock root, one ounce.
Boiling water, two pints.

Infuse for six hours, and strain.

Cottereau.

Used as a diaphoretic in rheumatic pains, etc.

Decoction of Burdock.

℞. Burdock root, two ounces.
Water, three pints.

Boil down to two pints, and strain.

Wood.

Dose, a wineglassful.

LAURUS.

Laurel. Bay Tree.

The berries (*Lauri baccæ*) and leaves (*Lauri folia*) of the *Laurus nobilis*, or bay tree, are used in medicine. This laurel is a small evergreen tree indigenous to the countries bordering on the Mediterranean.

Sex. Syst. Enneand. monog. *Nat. Syst.* Lauraceæ.

Linn. Sp. Pl. 529. Griffith, Med. Bot. 550.

The leaves are fragrant, and have an aromatic, bitterish taste. The berries are small, oval, of a deep blue, when fresh, of a brownish-black, when dried, aromatic, and with an acrid, bitterish taste; they contain a concrete, greenish oil. Neither the leaves, nor berries, nor their products, are now much used in medicine; they are stimulant and narcotic.

Oil of Laurel.

℞. Fresh laurel berries, at will.

Crush, warm the pulp for a few moments by a gentle heat, and subject to pressure.

Guibourt.

Used as a friction, in swelling and pain in the joints, colic, etc.

Laurel Ointment.

℞. Suet, eight ounces.

Melt, and add

Laurel oil, one pound.
Essence of turpentine, one ounce and a half.

Port. Ph.

℞. Fresh laurel leaves,
Laurel berries, each, one part.
Lard, two parts.

Digest until moisture has evaporated, let settle, decant, and stir while cooling.

Paris Codex.

There are a variety of formulas for this ointment, which is much used under the name of *Nervine ointment, or balsam.*

LAURO-CERASUS.

Cherry-Laurel.

This is the officinal appellation of the leaves of the *Prunus lauro-cerasus*, a small evergreen tree, a native of Asia Minor, but cultivated in the temperate parts of Europe, both for ornament and for medicinal purposes.

Sex. Syst. Icosand. monog. *Nat. Syst.* Drupaceæ.

Linn. Sp. Pl. 678. Griffith, Med. Bot. 289.

The leaves are ovate-oblong, smooth, and shining, with scarcely any smell when entire, but, when bruised, giving out a strong, bitter-almond odor; they have an astringent, bitter taste, with a flavor like the peach kernel. They become scentless by desiccation. They possess properties analogous to those of hydrocyanic acid, and some of the preparations from them are used for similar purposes. From the plant not being cultivated in this country, these preparations are not in use.

Cherry-Laurel Water.

℞. Fresh leaves of cherry-laurel, one pound.
Water, two pints and a half.

Chop the leaves, mix them with the water, and distil off one pint (imp.); agitate this well, and filter. *Brit. Ph.*

A sedative narcotic, similar to diluted hydrocyanic acid, but of uncertain strength. Dose, thirty minims to a fl. drachm.

℞. Fresh cherry-laurel leaves, twelve parts.

Cut, bruise, and macerate with

Water, thirty-six parts.
Alcohol, one part.

Distil ten parts, or sufficient that one thousand grains of the distillate shall contain one grain of anhydrous hydrocyanic acid.

Ph. Germ.

Paris Codex directs one-half this strength.

℞. Essential oil of cherry-laurel, half a drachm.
Diluted hydrocyanic acid, six drachms.
Distilled water, twelve fl. ounces.

Rub together, and filter. *Hœnle.*

Infusion of Cherry-Laurel.

℞. Fresh leaves of cherry-laurel, four ounces.
Cold water, two pints.

Infuse, strain, and add

Clarified honey, four ounces.

Used as a lotion in cancer of the lips, and in malignant ulcers. *Cadet.*

Ointment of Cherry-Laurel.

℞. Essential oil of cherry-laurel, one drachm.
Lard, one ounce.

Mix. As an application to alleviate pain of cancers. *Soubeiran.*

Cherry-Laurel Water Lotion.

℞. Distilled cherry-laurel water, four ounces.
Sulphuric ether, one ounce.
Extract of belladonna, two drachms.

Mix. Said to be very beneficial as a lotion in cases of neuralgia. *Roux.*

Mixture of Cherry-Laurel Water.

℞. Cherry-laurel water, sixty drops.
Peppermint water, two fl. ounces.
Infusion of quassia, four fl. ounces.

Mix. In dysentery, etc., in doses of a tablespoonful, three times a day. *Augustin.*

Cerate of Cherry-Laurel.

℞. Cherry-laurel water, twelve parts.
Oil of almonds, sixteen parts.
White wax, four parts.

Melt the oil and wax together, and mix the cherry-laurel water, stirring well. As an application to burns. *Roux.*

LAVANDULA.

Lavender.

Several species of Lavandula are used in medicine, but the only one recognized by the U. S. Ph. is the *Lavandula vera.* This is a small shrub, a native of the south of Europe, and commonly cultivated in our gardens; it has opposite, sessile, narrow leaves, and spikes of small, blue flowers.

Sex. Syst. Didyn. gymnos. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 800. Griffith, Med. Bot. 501.

The part used is the flowers; these have a strong, fragrant odor, and an aromatic, warm, bitterish taste. Lavender is an aromatic stimulant, and much used in nervous debility, but is mostly employed as a perfume.

Compound Powder of Lavender.

℞. Lavender, Benzoin, Cloves, Sal ammoniac, each, one ounce.

Petals of red roses, four ounces.
Pomegranate flowers, Chamomile flowers, Pot marigold flowers, each, two ounces.
Peppermint flowers, six drachms.
Myrrh, four drachms.
Cologne water, two drachms.
Solution of ammonia, eighteen drops.
Oil of cinnamon, six drops.

Mix well. To perfume rooms and drawers. *Guibourt.*

Spirit of Lavender.

℞. Oil of lavender, a fl. ounce.
Stronger alcohol, three pints.

Dissolve. *U. S. Ph.*

Brit. Ph. uses nearly the same proportions (1 : 49), but directs proof spirit, sp. gr. .920.

℞. Fresh lavender, one part.
Alcohol,
Water, each, three parts.

Mix, and after twenty-four hours distil four parts. *Ph. Germ.*

Lavender Water.

℞. Oil of lavender, one fl. ounce.
Diluted alcohol, fifteen fl. ounces.

Mix. *Gray.*

℞. Alcohol, five gallons.
Oil of lavender, twenty ounces.
" bergamot, five ounces.
Essence of ambergris, half an ounce.

Mix. *Brande.*

℞. Oil of lavender, four fl. ounces.
Essence of musk, two fl. ounces.
Oil of bergamot, ten fl. drachms and a half.
Oil of cloves, five drachms.
" roses, one drachm.
" origanum, half a drachm.
" rosemary, half a drachm.
Alcohol, ten pints.
Water, two pints.

Mix. *Gray.*

These are used for perfumes.

℞. Flowering tops of lavender, two pounds.
Water, sufficient.

Distil four pounds by steam. *Paris Codex.*

Compound Spirit of Lavender.
(Compound Tincture of Lavender.)

℞. Oil of lavender, one and a half fl. drachms.
Oil of rosemary, ten minims.
Bruised cinnamon,
" nutmeg, each,
one hundred and fifty grains.
Rasped red saunders, three hundred grains.
Alcohol, sp. gr. .920, sufficient.

Macerate the coarse powders for seven days in two imperial pints of the alcohol; then express, strain, dissolve the oils, filter, and add alcohol to make two pints. *Brit. Ph.*

℞. Oil of lavender, a fl. ounce.
Oil of rosemary, two fl. drachms.
Cinnamon, in powder,
No. 50, two troyounces.
Cloves, in powder,
No. 50, half a troyounce.
Nutmeg, in powder,
No. 50, one troyounce.
Red saunders, in powder,
No. 50, three hundred and sixty grains.
Alcohol, six pints.
Water, two pints.
Diluted alcohol, sufficient.

Dissolve the oils in the alcohol and add the water. Mix the powders, displace with the alcoholic solution and afterwards with diluted alcohol until eight pints have been obtained. *U. S. Ph.*

As a stimulant and carminative, in doses of thirty drops to a fl. drachm.

Ointment of Lavender.

℞. Oil of lavender, } equal parts.
" nutmeg, }
Butter of cacao, }

Mix. To increase the growth of hair.

Ethereal Tincture of Lavender.

℞. Oil of lavender, one part.
Ether, seven parts.

Mix. Dose, five to ten drops. *Béral.*

Compound Essence of Lavender.

℞. Oil of lavender, forty-eight drops.
" cloves, thirty-two drops.
" orange-peel, sixteen drops.
" bergamot, eight drops.
Sweet spirit of nitre, eight drops.
Oil of yellow sandal wood, } each,
" neroli, } two
" roses, } drops.
" cinnamon, one drop.
Diluted alcohol, one ounce.

Dissolve, and add

Honey water, eight ounces.
Essence of ambergris and musk, one ounce.

Mix. As a perfume. *Redwood.*

LEPTANDRA.

CULVER'S ROOT.—CULVER'S PHYSIC.

L. virginica (*Veronica virginica*, Lin.) is indigenous to this country, where it grows in low grounds on the borders of woods, etc.

Sex. Syst. Diand. monog. *Nat. Syst.* Scrophulariaceæ.

The part employed is the subterraneous portion, which is a woody rhizome, with numerous rootlets attached; they are externally of a black color, internally whitish, inodorous, of a somewhat nauseous, bitter, and acrid taste. Leptandra is an active cathartic, and in larger doses emetic; it appears to likewise possess cholagogue properties. The dose of the powder is twenty to thirty grains. Under the incorrect name of *leptandrin*, the impure resin is used in the dose of about two to four grains.

LIMON.

LEMON.

The Lemon is the fruit of the *Citrus limonum*, a native of Asia, but now generally cultivated in all warm climates.

Sex. Syst. Polydelph. icosand. *Nat. Syst.* Aurantiaceæ.

Risso, Ann. Mus. xx. 201. Griffith, Med. Bot. 168.

The parts used in medicine are the juice and the outer rind; the latter has a fragrant odor, and an aromatic, bitter taste; the juice, as is well known, is very acid, with a peculiar, grateful, and refreshing taste.

Spirit (Essence) of Lemon.

℞. Oil of lemon, two fl. ounces.
Stronger alcohol, two pints.
Lemon-peel, freshly grated, a troyounce.

Mix. Macerate for twenty-four hours, and filter; used for flavoring mixtures, and for pastry. *U. S. Ph.*

℞. Thin outer rinds of lemons, at will.
Alcohol, sufficient.

Put the rinds in a bottle, add sufficient al-

cohol to cover, and macerate two days. Filter.

For pastry the flavor of this preparation is more delicate than if made from the oil usually found in the shops. *Francis.*

Tincture of Lemon-Peel.

℞. Fresh lemon-peel, two ounces and a half.
Proof spirit, one pint (imp.).

Macerate for seven days, express, and filter. *Brit. Ph.*

Dose, one to two fl. drachms.

Distilled Spirit of Lemon.

℞. Fresh lemon-peel, one part.
Alcohol, 80 per cent., six parts.

Macerate for two days, add sufficient water, and distil, by means of a water-bath, all the alcohol. *Paris Codex.*

Lozenges of Oil of Lemon.

℞. Oil of lemon, one drachm.
Sugar, twelve ounces.
Lemon water, sufficient.

Boil one-third of the sugar with the lemon water, to the consistence of honey, by a gentle heat, add the rest of the sugar and the oil, and form lozenges. *Cottereau.*

Lozenges of Lemon Juice.

℞. Lemon juice, two ounces and a half.
Sugar, sixteen ounces.
Essence of lemon, one scruple.

Mix, and form lozenges. *Radius.*

Collutory of Lemon Juice.

℞. Lemon juice,
Sugar, each, one part.
Claret wine, sixteen parts.

As a mouth-wash in scurvy. *Brera.*

Lemonade.

℞. Lemon juice, four ounces
Fresh lemon-peel, half an ounce.
Sugar, four ounces.
Boiling water, three pints.

Mix, and let cool. *Ellis.*

℞. Lemons, three.
Boiling water, two pints.
Sugar, two ounces.

Cut the lemons in slices, pour the water on them, and add the sugar at the end of an hour, and strain. *Ratier.*

Compound Lemonade.

℞. Lemons, two.

Peel them, remove the seeds, and beat them with

Toasted bread, two ounces.

Adding, gradually,

Infusion of malt, one pint and a half.

Strain, and add

Syrup of mulberries, one ounce.
Wine, six ounces.

Cadet.

Lemon-Peel Water.

℞. Pare the rind of one lemon, previously rubbed with half an ounce of loaf sugar; put both into a jar, and add a quart of boiling water; when cold, decant, and add one tablespoonful of lemon juice.

A. T. Thomson.

Lemon Syrup.

℞. Strained fresh lemon juice,
Water, each, one pint.
Sugar, in coarse powder, forty-eight troyounces.

Mix, and dissolve with gentle heat. *U. S. Ph.*

℞. Fresh lemon-peel, two ounces.
Strained lemon juice, one pint imp.
Refined sugar, two and a quarter pounds.

Heat the lemon juice to the boiling point, add the lemon-peel, when cool, filter and dissolve the sugar with a gentle heat. The product should weigh three pounds and a half. *Brit. Ph.*

Paris Codex dissolves seventeen and a half parts of sugar in ten parts of clarified lemon juice.

Syrup of Lemon-Peel.

℞. Fresh lemon-peel, three ounces.
Boiling water, one pint.

Infuse for three days, and add

Sugar, two pounds.

The product weighs three pounds. *Guibourt.*

Vinous Syrup of Lemon-Peel.

℞ Fresh lemon-peel, half a pound.
Wine, a pint and a half.

Macerate for twenty-four hours, express, and add

Syrup, one pound and a half.

Boil, strain, and add

Oil of lemon, rubbed with sugar, fifteen drops.

Sard. Ph.

Odoriferous Spirit of Lemon.

℞ Oil of lemon, " bergamot, " lavender, each, one part.
Acetic ether, four parts.

Mix. Used as a perfume. *Sax. Ph.*

Cologne Water.

℞ Oil of bergamot, " lemon, " cedrat, each, four ounces.
" rosemary, " neroli, " lavender, each, two ounces.
" cinnamon, one ounce.
Alcohol, thirty pounds.
Eau de melisse, sixty ounces.
Spirit of rosemary, forty ounces.

Dissolve the oils in the alcohol, add the other articles, and, after eight days, distil four-fifths. *Paris Codex.*

℞ Balm, two pounds.
Rosemary, eight ounces.
Lemon-peel, six ounces.
Nutmeg, Cloves, Cinnamon, Coriander, each, two ounces.
Oil of bergamot, one ounce.
Alcohol, six pounds.
Water, eight pounds.

Mix, and distil by a gentle fire. *Niemann.*

℞ Oil of neroli, " lemon, " bergamot, " orange, " rosemary, each, twelve drops.
Cardamom, one drachm.
Alcohol, one pint.

Mix, and distil two-thirds. Said by Tromsdorff to be the formula used at Cologne. *Niemann.*

℞ Oil of bergamot, " lemon, " cedrat, " neroli, " cinnamon, " rosemary, each, four drachms.
Alcohol, three pounds.
Spirit of rosemary, three ounces.

Digest for a few days, and distil almost to dryness; add to the product

Balm water, nine ounces.
Spirit of jasmine, " orris, each, four drachms.

Giordano.

℞ Oil of bergamot, three ounces.
" lemon, two ounces.
" lavender, three drachms and a half.
" neroli, two drachms and a half.
" origanum, two drachms.
" rosemary, one drachm.
Essence of vanilla, two drachms.
Musk, ten grains.
Alcohol, thirteen pints.
Rose water, two pints.
Orange-flower water, one pint.

Mix, and after fourteen days, filter. *Gray.*

℞ Essence of bergamot, two ounces.
" rosemary,
" mint, each, one drachm.
" lemon, two drachms.
" neroli, ten grains.
Balm water, two ounces and a half.

Mix. *Ferrara Ph.*

℞ Oil of bergamot,
" lemon, each, one drachm.
" neroli, half a drachm.
" cedrat, twenty drops.
Honey water, one ounce.
Alcohol, one pint.

Mix. *Gray.*

℞ Oil of neroli, " orange, " lemon, " marjoram, " rosemary, each, one drachm and a half.
" cinnamon, four drops.
Civet, three grains.

Ambergris, two grains.
Alcohol, four pounds and a half.
Macerate for a month, and filter. *Swediaur.*

R. Oil of bergamot, three drachms.
" lemon, two drachms.
" lavender, twenty-five drops.
" neroli, fifteen drops.
" origanum, ten drops.
Alcohol, two pints.
Mix. *Gray.*

Unparalleled Water.

R. Oil of lemon, half an ounce.
" bergamot, two drachms and a half.
" cedrat, two drachms.
Alcohol, seventy-two ounces.
Hungary water, eight ounces.
Mix. *Guibourt.*

LINUM.

FLAXSEED.

Flaxseed is the product of *Linum usitatissimum*, or common flax, now cultivated in most parts of the world, but whose native country is unknown.

Sex. Syst. Pentand. pentag. *Nat. Syst.* Linaceæ.

Linn. Sp. Pl. 397. Griffith, Med. Bot. 206.

Both the seeds and the oil extracted from them are officinal. The first are small, oval, shining, and of a brown color. They are devoid of smell, and have a mucilaginous taste when unbroken, but an oily one when chewed. When steeped in water they afford a viscid, inodorous, and almost tasteless mucilage. The oil, which is obtained by expression, is laxative and emollient, but is principally used in the arts.

The flaxseed meal of *U. S. Ph.* consists of the ground seeds and contains the oil; that of the *Brit. Ph.* is the so-called *cake meal*, or ground flaxseed from which the oil has been expressed.

Compound Meal of Flaxseed.

R. Flaxseed meal, Barley meal, Rye meal, } equal parts.
Mix. To make cataplasm. *Cottereau.*

Emollient Cataplasm.

R. Compound meal of flaxseed, four ounces.
Water, sufficient.
Boil to proper consistence. *Paris Codex.*

Cataplasm of Flaxseed.

R. Cake meal, four ounces.
Olive oil, half a fl. ounce.
Boiling water, ten fl. ounces.
Mix the meal gradually with the water, and add the oil. *Brit. Ph.*

Charcoal Poultice.

R. Wood charcoal, in powder, half an ounce.
Crumb of bread, two ounces.
Cake meal, one ounce and a half.
Boiling water, ten fl. ounces.
Macerate the bread in the water near the fire, mix, stir in the meal and half the charcoal, and sprinkle the remainder of the charcoal on the surface of the poultice. *Brit. Ph.*

Cataplasm of Flaxseed Meal and Bran.

R. Flaxseed meal, Bran, equal parts.
Boiling water, sufficient.
Pour the water on the bran and meal, and stir constantly until the poultice has a pulpy consistence. *Ellis.*

Compound Infusion of Flaxseed.

R. Flaxseed, half a troyounce.
Liquorice root, bruised, two drachms.
Boiling water, one pint.
Macerate for two hours in a covered vessel, and strain. *U. S. Ph.*

The infusion of *Brit. Ph.* is of about the same composition and strength.

A pleasant demulcent drink, in inflammatory affections of the lungs, bladder, etc.

Mucilage of Flaxseed.

R. Flaxseed, one part.
Lukewarm water, five parts.
Digest for six hours, express, and strain. *Paris Codex.*

Flaxseed Mixture.

R. Flaxseed, one drachm.
Boiling water, six fl. ounces.
Infuse, strain, and add
Syrup of poppies, half an ounce.
Orange-flower water, two fl. drachms.
Mix. *St. Marie.*

Clyster of Flaxseed Oil.

℞. Flaxseed oil, two ounces.
" infusion, eight ounces.
Mix. *Swediaur.*

LIQUIDAMBAR.

Sweet Gum.

This is a large and beautiful tree, indigenous to the United States. A balsam is obtained from it in the Southern States, by making incisions into the bark.

Sex. Syst. Monœc. polyan. *Nat. Syst.* Balsamifluæ.

The parts employed in medicine are the bark and the balsam. The former has an astringent and somewhat aromatic taste; the latter resembles balsam of Peru and storax in smell and taste, and is employed in some sections of the South for the same purposes and in the same doses as tolu, in the form of tincture and syrup made by the formulas for the corresponding tolu preparations.

Syrup of Sweet Gum Bark.

℞. Sweet gum bark, five troyounces.
Sugar, twenty-four troyounces.
Water, sufficient.

Obtain from the powdered bark, by maceration and displacement, one pint of infusion, and dissolve in it the sugar by agitation. Dose, for an adult, a fl. ounce, in diarrhœa and dysentery. *C. W. Wright.*

LIRIODENDRON.

Tulip Tree Bark.

The tulip tree, or *Liriodendron tulipifera*, is one of the most magnificent of our native trees. It is found in most parts of the United States, and is popularly known as the poplar.

Sex. Syst. Polyand. polyg. *Nat. Syst.* Magnoliaceæ.

Linn. Sp. Pl. 755. Griffith, Med. Bot. 98.

The officinal portion is the bark; this, when deprived of its epidermis, is of a yellowish-white color, having a faint odor, but a bitter, pungent, aromatic taste. It is a stimulating tonic, and has been used as a febrifuge, as well as in dyspepsia, chronic rheumatism, etc. The dose in powder is from half a drachm to two drachms.

Infusion of Tulip Tree Bark.

℞. Tulip tree bark, one ounce.
Boiling water, one pint.

Infuse, and strain. Dose, one to two fl. ounces, as a stimulating tonic and diaphoretic. *Wood.*

Tincture of Tulip Tree Bark.

℞. Tulip tree bark,
bruised, four ounces.
Diluted alcohol, one pint.

Macerate for a week, express, and filter. Dose, about a fl. drachm. *Beasley.*

LITHIUM.

Carbonate of Lithium.

An amorphous or minutely crystalline powder, soluble in about one hundred parts of cold water, insoluble in alcohol, and of a slight alkaline taste. It possesses diuretic and lithontriptic properties. Dose, three to six grains.

Effervescent Lithia Water.

℞. Carbonate of lithium, ten grains.
Water, twenty ounces.

Mix and impregnate with washed carbonic acid gas under a pressure of seven atmospheres.

Dose, five to ten fl. ounces. *Brit. Ph.*

Citrate of Lithium.

℞. Carbonate of lithium,
one hundred grains.
Citric acid, two hundred grains.
Distilled water, two fl. ounces.

Mix, heat until effervescence ceases, evaporate by a steam-bath to a viscid consistence, dry at a temperature of about 240°, pulverize rapidly, and keep in a well-stopped bottle. *U. S. Ph.*

Brit. Ph. uses ninety grains of citric acid to fifty grains of carbonate of lithium.

Deliquescent in open air. Dose, five to ten grains.

LOBELIA.

Lobelia.—Indian Tobacco.

Several species of Lobelia are medicinal, but the only one recognized as officinal is the *L. inflata*, a small annual plant found in most parts of the United States, having numerous small blue flowers, on leafy racemes. The leaves are ovate, sessile, serrate, and hairy.

Sex. Syst. Pentand. monog. *Nat. Syst.* Lobeliaceæ.

Linn. Sp. Pl. 1006. Griffith, Med. Bot. 418.

The whole herb is officinal, but the root and seed vessels are the most active. When dried, it has a somewhat unpleasant odor, and an acrid, burning, nauseous taste, resembling that of tobacco. It is emetic, and,

in small doses, expectorant and sudorific. It also possesses narcotic properties. It is principally used in asthma; it has also been used in other diseases of the respiratory organs, etc. Dose in substance, as an emetic, from five to twenty grains, as an expectorant, one to three grains.

Infusion of Lobelia.

℞ Lobelia, one ounce.
Boiling water, one pint.

Infuse. A fl. ounce every half hour, till vomiting ensues. *Ellis.*

Tincture of Lobelia.

℞ Lobelia, in powder,
No. 60, four troyounces.
Diluted alcohol, sufficient.

Obtain by displacement two pints.
U. S. Ph.

The tincture of *Brit. Ph.* is of nearly the same strength; that of *Ph. Germ.* is made of ten parts of alcohol (0.892) to one part of lobelia.

Dose, as emetic, half fl. ounce; as antispasmodic in asthma, one to two fl. drachms, every two or three hours; and as an expectorant, ten to forty drops.

Ethereal Tincture of Lobelia.

℞ Lobelia, in coarse
powder, five ounces.
Spirit of ether, forty fl. ounces.

Form tincture by maceration. *Brit. Ph.*
Dose, the same as alcoholic tincture.

℞ Lobelia, one pound.
Alcohol, four pints.
Spirit of nitrous ether, four pints.
" sulphuric ether,
four ounces.

Macerate for fourteen days in a dark place, and filter. Dose, five to twenty minims.
Whitelaw.

Mixture of Lobelia.

℞ Tincture of lobelia, one drachm.
Decoction of mallow, six ounces.

A spoonful, every two or three hours, as an expectorant. *Radius.*

Acetic Extract of Lobelia.

℞ Lobelia seed, bruised,
eight ounces.
Diluted alcohol, four pints.
Acetic acid, one fl. ounce.

Macerate the seed in the diluted alcohol, to which the acid has been added, for forty-eight hours; then displace until four pints of tincture are obtained, using diluted alcohol to expel the last portion, and then evaporate to the consistence of an extract.
W. Procter.

Fluid Extract of Lobelia.

℞ Bruised lobelia tops, eight ounces.
Acetic acid, one fl. ounce.
Diluted alcohol, three pints.
Alcohol, six fl. ounces.

Macerate the lobelia in a pint and a half of the diluted alcohol, mixed with the acid, for twenty-four hours; introduce into a percolator, and obtain three pints of tincture; evaporate this in a water-bath to ten fl. ounces, strain, add the alcohol, and filter. A fl. drachm is equal to half a fl. ounce of the tincture. *W. Procter.*

Vinegar of Lobelia.

℞ Lobelia leaves, in powder,
No. 40, four troyounces.
Diluted acetic acid, sufficient.

Moisten the powder with two fl. ounces and afterwards displace with diluted acetic acid until two pints of liquid have been obtained.
U. S. Ph.

Syrup of Lobelia.

℞ Vinegar of lobelia, six fl. ounces.
Sugar, twelve ounces (av.).

Dissolve the sugar in the vinegar, by aid of heat, remove the scum which rises, and strain. *W. Procter.*

℞ Fluid extract of
lobelia, two fl. ounces.
Simple syrup, ten fl. ounces.

Mix. *W. Procter.*

LUPULINA.

Lupulin

Is the powder attached to the strobiles of *Humulus lupulus*, and has all the properties of hops. It is a yellowish powder, mixed with portions of the scales of the hop strobiles. It is tonic, and somewhat narcotic. It is obtained by rubbing, or threshing and sifting the strobiles, or by washing these several times in different portions of water, mixing the washings, and letting the lupulin deposit, when it is to be dried. The dose is from six to ten grains.

Powder of Lupulin.

℞ Lupulin, one part.
Sugar, two parts.
Mix. Dose, ten to twenty grains. *Foy.*

Pills of Lupulin.

℞ Lupulin, at will.
Rub into mass in a warm mortar, and divide into two grain pills. *Magendie.*

℞ Lupulin, two drachms.
Gum tragacanth,
Water, each, sufficient.
Make mass, and divide into pills of two grains.

Extract of Lupulin.

℞ Lupulin, four ounces.
Alcohol, eight fl. ounces.
Mix in a percolator, and allow to stand for an hour. Displace until two pints of filtered liquor are obtained; then set aside in a shallow dish for spontaneous evaporation. One drachm of lupulin yields two scruples of extract. *Livermore.*

Tincture of Lupulin.

℞ Lupulin, four troyounces.
Alcohol, sufficient.
Obtain by displacement two pints. *U. S. Ph.*
Dose, one to two fl. drachms, in sweetened water.

Syrup of Lupulin.

℞ Tincture of lupulin, one part.
Syrup, seven parts.
Mix. Dose, half an ounce to an ounce. *Foy.*

Fluid Extract of Lupulin.

℞ Lupulin, sixteen troyounces.
Stronger alcohol, sufficient.
Moisten lupulin with six fluidounces of the alcohol, pack tightly into a percolator, add ten fluidounces of stronger alcohol, and macerate for four days; then displace twenty-four fluidounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with reserved portion. *U. S. Ph.*
Dose, five to ten minims.

Oleoresin of Lupulin.

℞ Lupulin, twelve troyounces.
Ether, sufficient.
Obtain by slow percolation twenty fl. ounces, distil and evaporate the ether completely. *U. S. Ph.*
Dose, one to three grains.

Emulsion with Lupulin.

℞ Tincture of lupulin, four scruples.
Syrup of red poppies,
" of orange flowers,
each, one ounce.
Emulsion of almonds, four ounces.
Water, ten ounces.
Mix. *Béral.*

Ointment of Lupulin.

℞ Lupulin, one part.
Lard, three parts.
Digest, on a water-bath, for five or six hours, and strain. To appease the pain of cancerous ulcers. *Soubeiran.*

LYCOPODIUM.

LYCOPODIUM.—CLUBMOSS.

Lycopodium clavatum is a small moss-like plant indigenous to North America, Europe, and Northern Asia.

Sex. Syst. Cryptogam. lycopod. *Nat. Syst.* Lycopodiaceæ.

The sporules of this and some allied species are used. It forms a fine mobile grayish-yellow powder, which is with difficulty moistened by water. It is now chiefly applied externally as an exsiccant to excoriated surfaces.

Mixture of Lycopodium.

℞ Lycopodium, three drachms.
Water, two fl. ounces.
Syrup of marsh mallow, one fl. ounce.
Mix by trituration. Dose, a dessertspoonful every hour or two. In strangury and dysuria, particularly of infants. *Hufeland.*

Compound Powder of Lycopodium.

℞ Lycopodium, one ounce.
Oxide of zinc, two to three scruples.
Mix thoroughly. As a dusting powder in excoriation of infants. *Berends.*

LYCOPUS VIRGINICUS.

BUGLEWEED.

This is an herbaceous plant indigenous to this country, with an obtusely quadrangular often purplish stem, lanceolate serrate leaves, and whitish flowers.

Sex. Syst. Didynam. gymnosperm. *Nat. Syst.* Lamiaceæ.

Bugleweed possesses mild astringent properties, and is believed to act somewhat as a narcotic; it has been recommended in hæmoptysis, and incipient consumption. It is given in doses of a scruple to a drachm in the form of infusion.

M.

MACIS.

MACE.

A laciniated and reticulated, smooth, thin, flexible membrane, of a saffron-yellow color, which is the arillus investing the shell of the nutmeg, which, in taste and odor, it much resembles. It is an active, aromatic stimulant, but is more used for culinary purposes than in medicine. The dose is from ten grains to a scruple.

Tincture of Mace.

℞ Mace, one part.
Alcohol, five parts.

Macerate for eight days, express, and filter. *Ph. Germ.*

Dose, from thirty to forty drops, as a carminative and stomachic.

Volatile Oil of Mace.

℞ Mace, bruised, at will.
Water, sufficient.

Distil and separate the oil. *Guibourt.*

Carminative Drops.

℞ Volatile oil of mace, half a drachm.
Nitrous ether, a drachm and a half.

Mix. In flatulent colic, ten or twelve drops on sugar. *Radius.*

MAGNESIUM.

This metal is not used, but many of its compounds are largely employed.

MAGNESIA.

MAGNESIA.

℞ Carbonate of magnesium, any quantity.

Put in an earthen vessel, and expose it to a red heat for two hours, or till the carbonic acid is wholly expelled. *U. S. Ph.*

Heavy Magnesia.

℞ Heavy carbonate of magnesium, any quantity.

Expose to a low red heat until free from carbonic acid. *Brit. Ph.*

℞ Mix solutions of one hundred and twenty-three parts of crystallized sulphate of magnesium, and one hundred and forty-four parts of crystallized carbonate of sodium; evaporate to dryness and calcine till the carbonic acid is expelled. Dissolve out the sulphate of sodium, wash, and dry. *R. Phillips.*

Powder of Magnesia and Rhubarb.

℞ Powdered rhubarb, one scruple.
Magnesia, ten grains.
Oil of cinnamon, one drop.

Mix. As a purgative, to be given in sugar and water. *Ellis.*

Powder of Magnesia and Sulphur.

℞ Precipitated sulphur,
Magnesia, each, half an ounce.

Mix. A teaspoonful, three or four times a day, as an aperient. *Ellis.*

Powder of Magnesia and Orange-Peel.

℞ Magnesia, four drachms.
Powdered orange-peel,
" fennel-seed,
each, one drachm.
Sugar, two drachms.

Mix. Ten or twelve grains, three times a day, as a stimulant to the digestive organs. *Foy.*

Troches of Magnesia.

℞ Magnesia, three troyounces.
Sugar, powdered, nine troyounces.

Nutmeg, powdered, one drachm.
Mucilage of tragacanth, sufficient.

Rub the first three ingredients together until thoroughly mixed, then form a mass with the mucilage, and divide into four hundred and eighty troches. *U. S. Ph.*

The troches of *Ph. Germ.* are made with chocolate mass, and contain one grain and a half of magnesia.

Magnesia Mixture.

℞. Magnesia, one drachm.
Water of ammonia, one fl. drachm.
Spirit of cinnamon, three fl. drms.
Water, five and a half fl. ounces.

Mix. Recommended by Dr. James, in the cardialgia of pregnant women. Two or three teaspoonfuls to be taken as occasion may require. *Sims.*

℞. Magnesia, two drachms.
Water, ten drachms.
Sugar, twelve drachms and a half.
Orange-flower water, five drachms.

Triturate the magnesia with the water, and heat to boiling, stirring constantly, then add the sugar, and when dissolved, the orange-flower water, and strain through a fine sieve. To be taken at one dose. *Paris Codex.*

℞. Magnesia, thirty grains.
Syrup of ginger, two drachms.
Peppermint water, two fl. ounces and a half.
Compound spirit of lavender, half fl. drachm.
Spirit of caraway, half fl. ounce.

Mix. A spoonful every hour, as an antacid. *Foy.*

Magnesia and Gentian.

℞. Magnesia, one drachm.
Infusion of gentian, six fl. ounces.

Mix. A wineglassful, three times a day, in cases of uric-acid diathesis. *Brande.*

Magnesia and Rhubarb Mixture.

℞. Magnesia, half a drachm.
Powdered rhubarb, two grains.
" sugar, one drachm.
Essence of peppermint, six drops.
Distilled water, one fl. ounce and a half.

Mix. In bowel complaints of children. A teaspoonful, every two hours, till it operates. *Ellis.*

MAGNESII ACETAS.

Acetate of Magnesium.

℞. Carbonate of magnesium, one hundred and twenty parts.
Acetic acid, sufficient

to saturate. Evaporate till the mixture weighs three hundred parts. It forms a syrupy fluid. One ounce of this solution mixed with three ounces of syrup of oranges constitutes the weaker solution, and one ounce and a half to three ounces of syrup forms the stronger solution. *Renault.*

MAGNESII CARBONAS.

Carbonate of Magnesium.

Light Carbonate of Magnesium.

℞. Sulphate of magnesium, ten ounces.
Carbonate of sodium, twelve ounces.

Dissolve the salts separately, each in five pounds of water, mix cold, boil for fifteen minutes, wash thoroughly upon a calico filter with boiling distilled water, and dry at or below 212°. *Brit. Ph.*

Heavy Carbonate of Magnesium.

℞. Sulphate of magnesium, ten ounces.
Carbonate of sodium, twelve ounces.

Dissolve the salts separately, each in twenty ounces of boiling water, mix, and evaporate by a sand-bath to dryness; digest the residue for half an hour with forty ounces of water, transfer to a calico filter, wash well, and dry at or below 212°. *Brit. Ph.*

Dose of the carbonates, ten to sixty grains.

Solution of Carbonate of Magnesium.

℞. Sulphate of magnesium, two ounces.
Carbonate of sodium, two ounces and a half.

Dissolve the salts separately, each in ten ounces of water, mix boiling hot, and boil until carbonic acid ceases to be evolved. Wash the precipitate thoroughly, then mix with twenty ounces of distilled water, pass an excess of pure carbonic acid gas into the mixture; let remain in contact under pressure for twenty-four hours, filter, impregnate again with carbonic acid, and bottle. It contains about thirteen grains of carbonate of magnesium in a fl. ounce. *Brit. Ph.*

℞. Sulphate of magnesium, seven drachms.
Bicarbonate of sodium, nine drachms.
Water, twenty fl. ounces.
Carbonic acid gas, six volumes.

Dissolve the salts in the water, and pass the gas through the mixture. The result will be bicarbonate of magnesium and sulphate of sodium in solution. *Phœbus.*

Dinneford's Fluid Magnesia.

℞. Howard's magnesia, seventeen and a half grains.
Distilled water, one fl. ounce.

Introduce into a cylindrical tinned vessel a mixture in these proportions, and force into it carbonic acid for five hours and a half, during the whole of which time the cylinder is kept revolving. *Pereira.*

Lozenges of Carbonate of Magnesium.

℞. Carbonate of magnesium, ten parts.
Powdered sugar, forty parts.
Mucilage of tragacanth, sufficient.

Make into lozenges of fifteen grains each. Dose, five to ten. *Paris Codex.*

Magnesia with Rhubarb.

℞. Carbonate of magnesium, twelve drachms.
Powdered sugar, ten drachms.
" rhubarb, three drachms.
Oil of fennel, twenty drops.

Mix to a uniform powder. *Ph. Germ.*
Used like the compound rhubarb powder of the *U. S. Ph.*

Dewees's Carminative.

℞. Carbonate of magnesium, half a drachm.
Tincture of assafetida, forty drops.
" opium, twenty drops.
Sugar, one drachm.
Distilled water, one fl. ounce.

Mix. In flatulent colic, diarrhœa, etc., of children. Dose, twenty drops and upwards, according to age. *Dewees.*

Dalby's Carminative.

℞. Carbonate of magnesium, two scruples.
Oil of peppermint, one drop.
" nutmeg, two drops.
" aniseed, three drops.
Tincture of castor, thirty drops.
" assafetida, fifteen drops.
Spirit of pennyroyal, fifteen drops.
Compound tincture of cardamom, thirty drops.
Peppermint water, two fl. ounces.

Mix. *Paris.*

℞. Carbonate of potassium, half an ounce.
Carbonate of magnesium, twelve ounces.
Laudanum, six fl. ounces.
Oil of peppermint, } each, two
" caraway, } fl. scruples.
" fennel, }
Sugar, thirty-five ounces.
Water, ten pints.

Triturate the oils with the sugar and magnesia, then add the remainder.
Phil. Coll. Ph.

Carbonate of Magnesium Mixture.

℞. Carbonate of magnesium, half a drachm.
Sulphate of magnesium, three drachms.
Aromatic spirit of ammonia, one fl. drachm.
Tincture of rhubarb, half fl. ounce.
" henbane, half fl. drachm.
Mint water, four fl. ounces.

Mix. As a carminative cathartic. A tablespoonful, two or three times a day.
Meigs.

Magnesia and Colchicum.

℞. Carbonate of magnesium, one drachm.
Sugar,
Gum Arabic, each, sufficient.
Wine of colchicum root, forty drops.
Distilled water, four fl. ounces.

Mix. In gout and rheumatism. A tablespoonful, every two hours, till it operates.
Ellis.

Mixture of Magnesia and Camphor.

℞. Magnesia, one drachm.
Camphor, half a drachm.
Sugar,
Gum Arabic, each, two drachms.

Sulphuric ether, half fl. drachm.
Distilled water, four fl. ounces.

Mix. In flatulency and irritable stomach. A tablespoonful, four or five times a day.
Ellis.

MAGNESII CITRAS.

Citrate of Magnesium.

℞. Citric acid, at will.

Dissolve in water, and add

Carbonate of magnesium, sufficient

to saturate; wash the powder, and dry by a gentle heat. Laxative, but not as active as the sulphate. *Beasley.*

Soluble Citrate of Magnesium.

℞. Crystallized citric acid, one hundred grains.
Calcined magnesia, thirty-five grains.
Water, fifteen drops.

Dissolve the acid with the water, then gradually add the magnesia; or omit the water and melt the acid in a sand-bath in its own water of crystallization, and incorporate the magnesia with it. The mixture soon hardens, and may be pulverized for use.

This formula is modified from one given by Dorvault, of Paris. *Parrish & Smith.*

Granular Citrate of Magnesium.

℞. Carbonate of magnesium, twenty-five parts.
Citric acid, seventy-five parts.

Mix, with sufficient water, to a thick pulp, and dry at or below 85°. With fourteen parts of this dry mass, mix

Bicarbonate of sodium, thirteen parts.
Citric acid, six parts.
Sugar, three parts.

Moisten the mixture with sufficient alcohol, rub through a suitable sieve, and dry carefully. *Ph. Germ.*

Dose, a tablespoonful or more, in water, during effervescence.

Solution of Citrate of Magnesium.

℞. Soluble citrate of magnesium, one ounce.
Water, eight fl. ounces.

Dissolve, transfer to a suitable bottle, and add

Syrup, one and a half fl. ounces.
Bicarbonate of potassium, forty grains.

Cork immediately and secure.
Parrish & Smith.

℞. Carbonate of magnesium, two hundred grains.
Crystallized citric acid, four hundred grains.
Bicarbonate of potassium, forty grains.
Syrup of citric acid, two fl. ounces.
Water, sufficient.

Dissolve the acid in four fl. ounces of water, and add the carbonate of magnesium; when dissolved, filter into a strong twelve-ounce bottle containing the syrup, add the bicarbonate and enough water to nearly fill the bottle, cork, secure with twine, and shake occasionally until the crystals are dissolved. *U. S. Ph.*

Dose, from a half to a whole bottle.

Citrate of Magnesium Water.

℞. Carbonate of magnesium, five drachms and a quarter.
Citric acid, five drachms and a half.
Lemon syrup, two drachms and a half.
Water, sufficient

to fill a Seidlitz-water bottle. Dissolve the acid in one-sixth of the water, triturate the carbonate with the remainder, and add to it half the acid solution; and, on the ceasing of the effervescence, pour it into the bottle with the syrup, add the acid solution, and cork instantly. As a purgative draught. *Bardet.*

MAGNESII PHOSPHAS.

Phosphate of Magnesium.

℞. Magnesia, at will.
Diluted phosphoric acid, sufficient

to saturate; filter, and evaporate to dryness.
Niemann.

Stated to be useful in rachitis, in doses of ten to twenty grains.

MAGNESII SULPHAS.

Sulphate of Magnesium. (Epsom Salts.)

Cheltenham Salts.

R. Sulphate of magnesium,
Chloride of sodium,
each, four parts.
Sulphate of sodium, three parts.

To be well dried before being powdered and mixed. Dose, half an ounce, or more, in solution. *Cooley.*

The *compound saline powder* of the *Ed. Ph.* differs from this, in the substitution of sulphate of potassium for the sulphate of sodium.

Seidlitz Water.

R. Sulphate of magnesium, two drachms.
Chloride of magnesium, eighteen grains.
Soda water, twenty fl. ounces.

Dissolve. As a purgative. *Foy.*

R. Sulphate of magnesium, two drachms to one ounce.
Water, one pint.

Dissolve, and charge the solution with three volumes of carbonic acid gas. *Beasley.*

Purgative Emulsion.

R. Sulphate of magnesium, two drachms.
Flake manna, one ounce.
Simple emulsion, four fl. ounces.

Dissolve. A tablespoonful every two hours. *Wendt.*

Sulphate of Magnesium and Tartar Emetic.

R. Sulphate of magnesium, one ounce.
Tartar emetic, one grain.
Flake manna, one ounce.
Lemon juice, half an ounce.
Water, eight fl. ounces.

Make a solution, and strain. A tablespoonful, every hour, till it operates. *Dewees.*

Sulphate of Magnesium and Coffee.

R. Sulphate of magnesium, one ounce.
Powdered roasted coffee, two drachms and a half.
Water, sixteen ounces.

Boil in an earthen vessel, for two minutes; remove from fire, and let infuse for some minutes; then filter, or strain. This will destroy the bitter taste of the salt. *Combes.*

Clyster with Sulphate of Magnesium.

R. Sulphate of magnesium, one ounce.
Olive oil, one fl. ounce.
Mucilage of starch, fifteen fl. ounces.

Dissolve and mix. One-half to be injected, and if it does not produce the desired effect, the remainder to be administered. *Brit. Ph.*

Sulphate of Magnesium and Sulphuric Acid.

R. Sulphate of magnesium, sufficient to saturate
Water, seven fl. ounces.

Add to solution,
Diluted sulphuric acid, one fl. ounce.

Dose, a tablespoonful, in a wineglassful of water, every hour, till it operates. *Henry.*

Sulphate of Magnesium and Rochelle Salt.

R. Sulphate of magnesium,
Tartrate of potassium and sodium, equal parts.

Dose, two to three drachms, in six ounces of water. *Christison.*

Sulphate of Magnesium, Aloes, etc.

R. Sulphate of magnesium, six drachms.
Carbonate of magnesium, ninety grains.
Wine of aloes, six fl. drachms.
Tincture of hops, two fl. drachms.
Dilute hydrocyanic acid, fifteen minims.
Infusion of cascarilla, seven fl. ounces.

Mix. A tablespoonful, morning and evening, in dyspepsia accompanied with costiveness. *L. Parker.*

Sulphate of Magnesium and Nitric Acid.

℞. Sulphate of magnesium, half an ounce.
Tincture of jalap, one fl. drachm.
Nitric acid, two drops.
Mint water, two fl. ounces.

Mix. To be taken for a draught. *Ellis.*

MAGNESII SULPHURETUM.

SULPHURET OF MAGNESIUM.

℞. Pure magnesia, five parts.
Sulphur, four parts.

Fuse together. Dose, five to ten grains. *Jourdain.*

Syrup of Sulphuret of Magnesium.

℞. Sulphuret of magnesium, half an ounce.
Fennel-water, six ounces.

Dissolve, strain, and add

Sugar, fifteen ounces.

Said to be useful in chronic exanthemata, hooping-cough, etc. Dose, a spoonful occasionally. *Radius.*

MAGNESII TARTRAS.

TARTRATE OF MAGNESIUM.

℞. Solution of tartaric acid, at will.
Carbonate of magnesium, sufficient

to saturate. Evaporate the solution to dryness, in a water-bath. Used by Rademacher, in painful chronic maladies of the spleen. Dose, one scruple to one drachm. *Pereira.*

Aperient Effervescing Magnesia.

℞. Carbonate of magnesium, one part.
Sulphate of magnesium, Bi-carbonate of sodium, Tartrate of sodium and potassium, Tartaric acid, each, two parts.

Drive off the water of crystallization by heat, reduce to powder, mix thoroughly, and inclose in dry, strong bottles, which are to be well corked, and sealed with wax. Dose, a teaspoonful, in half a tumbler of water, drunk in a state of effervescence. *Durand.*

Bi-Tartrate of Magnesium.

℞. Tartaric acid, one hundred and twenty-five parts.
Distilled water, two thousand parts.

Dissolve, and add gradually

Carbonate of magnesium, one hundred and fifty-seven parts.

Evaporate and crystallize. *Ph. Hanov.*

MAGNOLIA.

The barks of several species of Magnolia are employed as stimulating tonics in the United States, those of *M. glauca*, *M. acuminata*, and *M. tripetala* being recognized by the pharmacopœia. They are stimulating, bitter tonics, with some diaphoretic powers, and the decoction has been used with some success in intermittent fevers and rheumatism, as has also a tincture of the cones. Dose, in powder, half a drachm to a drachm.

Tincture of Magnolia.

℞. Recently-dried bark, or cones of magnolia, four ounces.
Diluted alcohol, one pint.

Macerate for a week, express, and filter. In chronic rheumatism. *Beasley.*

MALTUM.

MALT.

Malt is barley germinated by warmth and moisture, and then subjected to such a degree of heat as to destroy the vital principle. It contains sugar, gum, and hordein, and is principally used in the manufacture of malt liquors.

Infusion of Malt.

℞. Ground malt, one pint.
Scalding water, three pints.

Infuse for two hours, strain, and add sugar or lemon juice, if required. *Ellis.*

Much prescribed by the late Dr. Parrish, as a drink in inflammatory fevers.

Extract of Malt.

℞. Ground malt, one part.
Cold water, one part.

Macerate for three hours, then add

Water, four parts.

Digest at 140° to 150° for one hour, heat to boiling, express, strain, and evaporate with constant stirring to a soft extract. *Ph. Germ.*

Emollient Clyster.

℞ Ground malt, Powdered mallow root, Pearl barley, each, two drachms.
Water, one quart.

Boil down to a pint, and strain. *Phœbus.*

MALVA.

Common Mallow.

Several species of Mallow are recognized as officinal in the European pharmacopœias, and, although they are very similar in their properties, that most generally employed is the *M. sylvestris*, the leaves and flowers being the officinal parts.

Sex. Syst. Monadelph. polyand. *Nat. Syst.* Malvaceæ.

They are emollient and demulcent, but are seldom employed in this country.

Species for Gargles.

℞ Mallow flowers, Elder flowers, Marsh mallow leaves, equal parts.

Cut, and mix. *Ph. Germ.*

Emollient Species.

℞ Mallow leaves, Marsh mallow leaves, Melilot, German chamomile, Flaxseed, equal parts.

Cut and bruise; mix. *Ph. Germ.*

℞ Leaves of mallow, " marsh mallow, " mullein, " parietaria, equal parts.

Cut and mix. *Paris Codex.*

Compound Decoction of Mallow.

℞ Dried mallow, one ounce.
Dried chamomile, half an ounce.
Water, one pint.

Boil for a quarter of an hour, and strain. Employed for fomentations and enemata. *Lond. Ph.* 1836.

MANGANESIUM.

Manganese.

This metal is never employed in medicine, but several of its oxides and salts have obtained some celebrity.

MANGANESII CARBONAS.

Carbonate of Manganese.

℞ Peroxide of manganese, at will.

Wash in very dilute muriatic acid, dissolve in strong muriatic acid, and evaporate to dryness. Dissolve part in water, and precipitate with carbonate of sodium, wash precipitate, and digest it with a solution of the rest of the salt. Filter, and precipitate by carbonate of sodium, wash, and dry. *Beasley.*

Pills of Carbonate of Manganese and Iron.

℞ Crystallized sulphate of iron, seventy-five parts.
Sulphate of manganese, twenty-five parts.
Crystallized carbonate of sodium, one hundred and twenty parts.
Honey, sixty parts.
Water, sufficient.

Mix well, and divide into pills of three grains. *Burin Dubuisson.*

MANGANESII CHLORIDUM.

Chloride of Manganese.

℞ Muriatic acid, at will.
Carbonate of manganese, sufficient

to saturate; evaporate, and crystallize. Preserve in closely-stopped bottles. A solution in water has been praised as a gargle in aphthous sore throat. *Jourdain.*

Pills of Chloride of Manganese.

℞ Chloride of manganese, two scruples.
Gum Arabic,
Extract of liquorice, each, one scruple.

Mix, and form pills of two grains. Advised in obstinate cutaneous affections, in doses of from five to ten. *Augustin.*

MANGANESII IODIDUM.

Iodide of Manganese.

Pills of Iodide of Manganese.

℞ Iodide of potassium,
Sulphate of manganese, equal parts.
Honey, sufficient.

Form mass, and divide into four-grain pills, which are to be kept in a well-stopped bottle. Dose, one pill, gradually increased to six pills, daily. *Hannon.*

Syrup of Iodide of Manganese.

℞. Sulphate of manganese, sixteen drachms.
Iodide of potassium, nineteen drachms.
Sugar,
Water, each, sufficient.

Dissolve each of the salts in three fl. ounces of water containing two drachms of syrup; mix, and after precipitation, filter the solution into a bottle containing twelve ounces of sugar; add water to make a pint, and shake the bottle till the sugar is dissolved. Each fl. ounce contains one drachm of iodide of manganese. Dose, ten drops to half a fl. drachm.
W. Procter, Jr.

℞. Iodide of potassium, three hundred and thirty grains.
Tartaric acid, two hundred and sixty-four grains.

Dissolve each in one and a half fl. ounces of water; mix, filter, and saturate the remaining hydriodic acid with carbonate of manganese. Then filter, and add sufficient syrup to make six fl. ounces. Each fl. ounce contains fifty grains of the iodide of manganese. *Livermore.*

Syrup of Iodide of Iron and Manganese.

℞. Iodide of potassium, one thousand grains.
Proto-sulphate of iron, six hundred and thirty grains.
Proto-sulphate of manganese, two hundred and ten grains.
Clean iron filings, one hundred grains.
Powdered sugar, four thousand eight hundred grains.
Distilled water, sufficient.

Rub the sulphates and iodide separately to powder, mix with the iron filings, add half a fl. ounce of water, and rub to an uniform paste; add the same quantity of water a second and a third time, at intervals of fifteen minutes, and rub. Place the sugar in a bottle, and drain the dense solution into it through a filter, adding water slowly to the magma, until the solution of the iodides is displaced, and the water measures twelve fl. ounces. Lastly, agitate the bottle till the sugar is dissolved. Each fl. ounce contains fifty grains of the iodides, in the proportion of three parts of iodide of iron to one of iodide of manganese. Dose, ten to twenty drops. *W. Procter, Jr.*

MANGANESII OXIDUM.

Black Oxide of Manganese.

Powder of Oxide of Manganese.

℞. Oxide of manganese, two grains.
Magnesia, one scruple.

Mix. To be taken every three hours, in chlorosis. *Brera.*

Bolus of Oxide of Manganese.

℞. Oxide of manganese, fourteen grains.
Extract of savin,
Aloes, each, ten grains.

Mix, and divide into six boluses; to be taken during the day, as an emmenagogue. *Niemann.*

Ointment of Oxide of Manganese.

℞. Oxide of manganese, one part.
Lard, two parts.

Mix thoroughly. *Giordano.*

Ointment of Oxide of Manganese and Sulphur.

℞. Oxide of manganese, Sulphur, Soap, each, one ounce.
Lard, three drachms.

Mix. *Beasley.*

Both these ointments have been recommended in porrigo and other skin diseases.

MANGANESII PHOSPHAS.

Phosphate of Manganese.

℞. Sulphate of manganese, four ounces.
Phosphate of sodium, five ounces.
Water, sufficient.

Dissolve the salts each in two pints of water, mix the solutions, wash the precipitate until the sulphate of sodium is removed, press in bibulous paper, and dry.
W. Procter, Jr.

MANGANESII SULPHAS.

Sulphate of Manganese.

℞. Black oxide of manganese, ten parts.
Pounded coal, one part.

Ignite in a gas retort. Dissolve the protoxide thus formed in sulphuric acid, with the addition at the end of a little hydrochloric acid; then evaporate the sulphate to dryness, and heat again to redness in the gas retort. By this process the iron present is rendered insoluble, while the sulphate of manganese may be dissolved out and crystallized. *Graham.*

℞. Carbonate of manganese, at will.
Diluted sulphuric acid, sufficient

to saturate. Evaporate and crystallize. Dose, one to two drachms, in half a pint of water; to be taken before breakfast, as a cholagogue cathartic. *Beasley.*

MANNA.

Manna.

This is the exudation of several varieties of *Fraxinus ornus*, or *Ornus Europæa;* a small tree found in the south of Europe.

Sex. Syst. Diand. monog. *Nat. Syst.* Oleaceæ.

Linn. Sp. Pl. 1510. Griffith, Med. Bot. 445.

There are several varieties of manna—*flake, common* or *in sorts*, and *fat*. The first is the best and purest. It consists of sugar, a peculiar principle called mannite, and a viscous, nauseous matter. Manna is a gentle laxative, but sometimes causes flatulence and pain. Dose, for an adult, one to two ounces; for children, one to four drachms.

Lozenges of Manna.

℞. Mallow root,
Water, each, four ounces.

Boil a short time, and add

Manna, twelve ounces.

When dissolved, strain, and add

Sugar, six pounds.
Opium, dissolved in water, twelve grains.

Evaporate to the consistence of an electuary, and add

Orange-flower water, three ounces.
Essence of bergamot,
" citron, each, four drops.

Evaporate to proper consistence, pour on a marble slab, and divide into lozenges.
Guibourt.

Syrup of Manna.

℞. Manna, three parts.
Water, twelve parts.

Dissolve and filter, then add

Sugar, sixteen parts.

Heat to boiling. *Ph. Germ.*

Emulsion of Manna.

℞. Sweet almonds, half an ounce.
Manna, two ounces.
Syrup of peach flowers, one fl. ounce.
Infusion of liquorice, four fl. ounces.
Orange-flower water, half fl. ounce.

Make an emulsion. *Radius.*

℞. Manna,
Oil of almonds, each, one ounce.
Carbonate of potassium, twelve grains.
Cinnamon water,
Water, each, three fl. ounces.

Rub the first three ingredients together, and gradually add the waters. Two fl. ounces to be taken daily, in divided doses, in inflammation of the kidneys.
Babington.

Manna Mixture.

℞. Sulphate of magnesium, one ounce.
Manna, six drachms.
Tincture of senna, one fl. drachm and a half.
Boiling water, five fl. ounces.

Mix. As a purge. *Ainslie.*

℞. Manna, one ounce.
Sulphate of sodium, one ounce and a half.
Water, six fl. ounces.

Mix. *Augustin.*

℞. Manna, ninety grains.
Tartrate of potassium, two drachms.
Wine of colchicum, twenty minims.
Tincture of cardamom, one drachm.
Compound infusion of senna, ten fl. drachms.

Make a draught. As an aperient in gout.
Barlow.

MANNITUM.

Mannite.

℞ Common manna, six pounds.
Distilled water, three pints.
White of egg, one.

Mix, and boil for a few minutes; strain when cold; press impure mannite in a cloth; mix it with its weight of water, and again press. Dissolve in boiling water, with animal charcoal, filter, evaporate to a pellicle, and set aside to crystallize. *Ruspini.*

℞ Manna, one part.
Boiling water, three parts.

Dissolve, and add subacetate of lead to separate gummy and resinoid matters; filter through muslin, and precipitate excess of lead by dilute sulphuric acid. Filter through paper, and concentrate by gentle heat to consistence of syrup. Pour the hot syrup into twice its bulk of cold alcohol, which will precipitate the mannite as the solution cools. *C. T. Bonsall.*

Dose, from two drachms to two ounces.

MARANTA.

Arrowroot.

Arrowroot is the fecula of the roots or rhizomes of many plants, but that in common use is derived from the *Maranta arundinacea*, a native of the West Indies.

Sex. Syst. Monand. monog. *Nat. Syst.* Marantaceæ.

Linn. Sp. Pl. 2. Griffith, Med. Bot. 637.

West Indian arrowroot is a light, white powder, tasteless and inodorous. It has a firm feel, and crackles when pressed. It is nutritious and demulcent, and is an article of diet well suited to the sick and convalescent, especially in bowel complaints. It is prepared for use by adding to it a certain proportion of boiling water, usually about a pint to a tablespoonful of the fecula.

Water Arrowroot.

℞ Rub the arrowroot with a little cold water, till well mixed; then pour boiling water over it, stirring constantly; afterwards boil for five minutes. Sweeten with white sugar, and flavor with lemon juice, or some aromatic; if wine be added, none of the astringent kinds should be used. *Thomson.*

Milk Arrowroot.

℞ Arrowroot, a tablespoonful.
Sweet milk,
Boiling water, each, half a pint.

Proceed as with water arrowroot. *Ellis.*

℞ Milk, fifteen fl. ounces.
Sugar, two ounces.
Arrowroot, one ounce.

Proceed as above. *Béral.*

Arrowroot Pudding.

℞ Rub a tablespoonful of arrowroot with a little cold water, and add to it, stirring constantly, a pint of boiling milk; with this mix one egg and three teaspoonfuls of sugar, previously beaten together. This may be boiled or baked, and forms a good diet in convalescence. *Thomson.*

Beef-Tea Arrowroot.

This is made in the same manner as the water arrowroot, except that beef-tea is used in the boiling state instead of water, and that the mixture is to be boiled twenty minutes instead of five. *Thomson.*

MARRUBIUM.

Horehound.

Horehound, *M. vulgare*, is a small, herbaceous plant, a native of Europe, and naturalized in some parts of this country.

Sex. Syst. Didynam. gymnos. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 816. Griffith, Med. Bot. 512.

The whole herb is officinal. It has a strong and peculiar odor in the fresh state, which is almost lost on drying. Its taste is bitter, and somewhat acrid. It is tonic, emmenagogue, antispasmodic, and, in large doses, laxative. The dose of the powder is from thirty grains to a drachm.

Extract of Horehound.

℞ Powdered horehound, sufficient.

Exhaust with water by the process of displacement, and evaporate to proper consistence. The dose is from a scruple to half a drachm.

Compound Decoction of Horehound.

℞ Dried horehound, one ounce.
Bruised liquorice root,
Flaxseed, each, half an ounce.
Boiling water, one pint and a half.

Macerate for four hours, and strain. Dose, from one to two fl. ounces, in catarrh. *Steph. & Church.*

Pectoral Mixture.

R. Extract of horehound,
" couch grass,
each, two drachms.
Decoction of dandelion, ten fl. ounces.
Oxymel of squill,
Syrup of fennel, each, two fl. ounces.

Mix. A tablespoonful occasionally.
Augustin.

Syrup of Horehound.

R. Dried horehound, one ounce.
Horehound water, two pints.

Digest for two hours, express, and add

Sugar, four pounds.

Form a syrup. *Cottereau.*

Horehound Candy.

R. Expressed juice of horehound, one pint.
Sugar, ten pounds.

Boil to proper consistence, pour into moulds, or on a marble slab, and divide.
Cooley.

Much used to allay irritation of throat, in catarrh.

MASTICHE.

MASTICH.—MASTIC.

Mastich is a concrete, resinous exudation from the *Pistacia lentiscus*; a small tree, a native of most of the countries bordering on the Mediterranean.

Sex. Syst. Dicec. pentand. *Nat. Syst.* Anacardiaceæ.

Linn. Sp. Pl. 1455. Griffith, Med. Bot. 186.

Mastich occurs in yellowish, semi-transparent, brittle grains or tears, of a mild, agreeable smell, and a resinous but not unpleasant taste. It is much used by the Turks as a masticatory to sweeten the breath and to strengthen the gums. It is more employed in the arts as the basis of varnishes, than in medicine.

Mastich Dentifrice.

R. Powdered mastich,
Prepared chalk, each, two drachms.
Powdered orris root, half an ounce.
Oil of roses, three drops.

Mix. *Phœbus.*

Aromatic Mastich Collutory.

R. Mastich, two drachms.
Balsam of Peru, half a drachm.
Gum Arabic, two drachms.
Orange-flower water, six fl. ounces.

Make an emulsion, and add

Tincture of myrrh, two fl. drachms.
Phœbus.

Anti-Odontalgic Paste.

R. Mastich,
Sandarac, each, two drachms.
Kino, ten grains.
Opium, two grains.
Oil of rosemary, eight drops.
Spirit of horseradish, sufficient.

Mix, and form a paste. Used to fill decayed teeth. *Gassicourt.*

Dinner Pills.

R. Aloes, six drachms.
Mastich,
Red roses, each, two drachms.
Syrup of wormwood, sufficient.

Beat into mass, and divide into three-grain pills. Dose, two pills as a laxative. (Compare page 109.)

Ethereal Tincture of Mastich.

R. Mastich, four parts.
Ether, one part.

Dissolve. To fill the cavity of carious teeth, for which purpose a small dossil of cotton is saturated with it, and introduced into the cavity. *Soubeiran.*

Picture Varnish.

R. Mastich, three hundred and sixty parts.
Venice turpentine, forty-five parts.
Camphor, fifteen parts.
Oil of turpentine, one thousand parts.

Dissolve with heat. *Redwood.*

Crystal Varnish.

R. Mastich, three ounces.
Alcohol, one pint.

Dissolve. Used to fix pencil drawings.
Cooley.

MATICO.

Matico.

This is the leaves of a Peruvian plant, or plants; in most cases of the *Artanthe elongata* (*Piper angustifolium*).

Sex. Syst. Diand. trigyn. *Nat. Syst.* Piperaceæ.

The leaves, as found in commerce, are strongly veined, or reticulated; of a greenish-ash-color; mixed with fragments of the stem and flower spikes; of a somewhat aromatic odor, and a warm, spicy taste. They have attained much celebrity as a hemostatic, and have also been given in mucous and other discharges. As a styptic, they are applied in substance to the bleeding part.

Infusion of Matico.

℞. Matico, cut small, half an ounce.
Boiling water, ten ounces.

Infuse for half an hour. Dose, one to four fl. ounces two or three times a day, or oftener. In hemorrhagic and other discharges. *Brit. Ph.*

Infusion of Matico and Senna.

℞. Matico,
Senna, each, two drachms.
Boiling water, one pint.

Infuse, and strain. Dose, one fl. ounce and a half, repeatedly. *Watmough.*

Decoction of Matico.

℞. Matico, one ounce.
Water, twenty ounces.

Boil for ten or fifteen minutes, and strain. Given as above. *Jeffreys.*

Tincture of Matico.

℞. Matico, two and a half ounces.
Diluted alcohol, one pint.

Macerate for fourteen days, and strain. *Lane.*

Dr. Jeffreys directs three ounces of matico. Dose, from thirty to sixty drops, in water. In hemorrhagic discharges, etc.

℞. Powdered matico leaves, eight ounces.
Proof spirit, two pints (imper.).

Macerate for fourteen days, express, and filter.

Dose, one fl. drachm. *Dub. Ph.*

Fluid Extract of Matico.

℞. Matico, in powder,
No. 50, sixteen troyounces.
Alcohol, twelve fl. ounces.
Glycerin, three fl. ounces.
Water, one fl. ounce.

Mix the liquids, moisten the powder with half a pint of the mixture, pack in a percolator, add the remaining mixture, and macerate for four days. Then, with diluted alcohol, displace twenty-four fl. ounces, reserving the first fourteen, add to the remaining tincture one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Extract of Matico.

℞. Matico, at will.

Treat by maceration and displacement with a mixture of three parts of alcohol (.835) and two parts of water. Evaporate the tincture on a water-bath, to consistence of an extract.

Dose, ten to twenty grains.

Syrup of Matico.

℞. Matico, four ounces.
Diluted alcohol, one pint.

Make tincture by displacement, evaporate to one-half; add

Sugar, sufficient,

and form syrup. *Ruschenberger.*

Used in same cases as the tincture. Dose, one to two fl. drachms.

Ointment of Matico.

℞. Powdered matico, three drachms.
" opium, three grains.
Lard, one ounce.

Mix. As an application to hemorrhoids. *Young.*

MATRICARIA.

German Chamomile.

This is the flowers of *M. chamomilla*, a small annual, herbaceous plant, native of many parts of Europe.

Sex. Syst. Syngen. superfl. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1256. Stokes, Bot. Mat. Med. iv. 238.

The flowers, which are the officinal part, are smaller than those of the true chamomile. They have a strong, penetrating, unpleasant odor, which is much diminished by drying. Their taste is bitter and somewhat nauseous. The medical properties are much the same as those of chamomile, and it is given in the same manner.

Syrup of German Chamomile.

℞. German chamomile, three parts.
Boiling distilled water, fifteen parts.

Macerate for several hours, and in ten parts of the strained liquid dissolve

Sugar, eighteen parts.

Dose, a tablespoonful. *Ph. Germ.*

Infusion of German Chamomile.

R. Flowers of German chamomile, six drachms.
Boiling water, eight fl. ounces.

Infuse for two hours, and strain. Dose, as a tonic, a tablespoonful every two hours. An extract and the oil are much used in Germany, for the same purposes as we employ common chamomile. *Walther.*

Oleo-infusion of Chamomile.

R. German chamomile, two parts.
Alcohol, one part.

Mix, macerate for several hours, and add

Olive oil, twenty parts.

Digest until the alcohol has evaporated, express, and after several days, filter. *Ph. Germ.*

Used in liniments.

Concentrated Water of German Chamomile.

R. German chamomile, ten parts.

Distil by means of steam one hundred parts, add two parts of alcohol, and again distil ten parts. To obtain *chamomile water*, dilute one part of the above with nine parts of distilled water. *Ph. Germ.*

MEL.

Honey.

This is a peculiar fluid, prepared from flowers by the *Apis mellifica*, or honey-bee.

In a recent state it is fluid, but by age concretes into a soft, granular mass. It has a peculiar, somewhat aromatic odor, and a sweet taste, followed by faint acridity. It resembles sugar in its properties, but is more laxative. It is principally used in medicine as a vehicle.

Clarified Honey.

R. Honey, at will.

Melt by means of a water-bath, and remove the scum. *U. S. Ph.*

R. Honey, one part.
Water, two parts.

Heat for one hour to 212°, avoiding to boil, cool to about 120°, filter, and evaporate by a water-bath to a syrupy consistence; strain. *Ph. Germ.*

Prepared Honey.

R. Clarified honey, half a pint.
Diluted alcohol, one pint.
Prepared chalk, half an ounce.

Mix the honey and alcohol, add the chalk, and let the mixture stand for two hours, occasionally stirring. Heat to boiling, filter, and evaporate on water-bath, so that when cold the sp. gr. will be 1.32. *U. S. Ph.* 1840.

Oxymel.

R. Clarified honey, forty ounces.
Acetic acid, five fl. ounces.
Distilled water, five fl. ounces.

Mix the acid and water with the honey previously heated. *Brit. Ph.*

R. Clarified honey, forty parts.
Acetic acid, one part.

Mix. *Ph. Germ.*

Hydromel.

R. Honey, two parts.
Water, twenty parts.

Dissolve, and strain. A refreshing and slightly laxative drink. *Paris Codex.*

Pectoral Hydromel.

R. Washed Iceland moss, two ounces.
Hyssop leaves, half an ounce.
Hydromel, two pounds.

Macerate for five days, strain, and add

Sugar, three ounces.

In catarrh, etc., one or two spoonfuls occasionally. *Foy.*

Expectorant Mixture.

R. Honey,
Fresh butter, each, two ounces.

Mix, and melt over a gentle fire. A spoonful occasionally. *St. Marie.*

Ceromel.

R. Yellow wax, one ounce.
Honey, four ounces.

Melt the wax and add the honey, stirring well. As an application to indolent ulcers. *Van Mons.*

Honey Water.

R. Honey, two parts.
Washed sand, three parts.

Introduce into a retort, and distil on a sand-bath, and remove the oil that floats on

the product. Aperient and diuretic; in doses of a scruple to half a drachm.
Spielmann.

℞ Rectified spirit, eight pints.
Rose water, two pints.
Orange-flower water, two pints.
Oil of cloves, half an ounce.
" lavender, half an ounce.
" bergamot, two ounces.
" sandal wood, one drachm.
Honey, one ounce.
Tincture of saffron, one ounce.
Musk, ten grains.

Macerate for a week, and filter. Used as a perfume. *Gray.*

℞ Honey,
Coriander, each, eight ounces.
Fresh lemon-peel, one ounce.
Cloves, six drachms.
Nutmeg, Benzoin, Storax, each, half an ounce.
Vanilla, three drachms.
Rose water,
Orange-flower water,
each, five ounces.
Alcohol, forty-eight ounces.

Distil by means of a water-bath. Sometimes amber or musk is added. This is chiefly used for the toilet. *Guibourt.*

MELILOTUS.

Melilot.—Sweet Clover.

This is the *M. officinalis*, an herbaceous plant, indigenous to Europe, and naturalized to some extent in this country.

Sex. Syst. Diadel. decand. *Nat. Syst.* Leguminosæ.

The leaves are ternate, with obovate leaflets and subulate stipules; the corolla is small and yellow. On drying, the odor of coumarin is developed. It is now mainly employed externally as an emollient and stimulating application to ulcers.

Plaster of Melilot.

℞ Yellow wax, four parts.
Turpentine,
Olive oil, each, one part.

Melt together, and when nearly cold add

Powdered melilot, two parts.

Mix well. *Ph. Germ.*

MELISSA.

Balm.

Several species have been used in medicine, but the only one that is officinal in this country is *M. officinalis*, a small herbaceous plant, which is a native of the south of Europe, and is very generally cultivated in our gardens.

Sex. Syst. Didynam. gymnos. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 827. Stokes, Bot. Mat. Med. iii. 365.

The whole herb is used; it has an agreeable odor, somewhat like that of lemons, and an aromatic, slightly bitter taste. Its medicinal properties are very slight, but it communicates an agreeable flavor to infusions.

Infusion of Balm. (Balm Tea.)

℞ Balm, two to four drachms.
Boiling water, six fl. ounces.

Infuse for two hours, and strain. Used to favor or restore the eruption in the exanthemata, in doses of a wineglassful.
Walther.

Balm Water.

℞ Fresh balm, ten parts.
Water, sufficient.

Mix, and distil ten parts. *Paris Codex.*

Ph. Germ. directs to distil ten parts of water from one part of dried balm.

Concentrated Balm Water.

℞ Balm, ten parts.

Distil, by means of steam, one hundred parts, add two parts of alcohol, and again distil ten parts. By diluting one part of this with nine parts of distilled water, *balm water* is obtained. *Ph. Germ.*

Compound Spirit of Balm.

℞ Fresh balm, ninety parts.
Fresh lemon-peel, fifteen parts.
Cinnamon, Cloves, Nutmeg, each, eight parts.
Angelica,
Coriander, each, four parts.
Alcohol, five hundred parts.

Macerate for four days, and distil.
Paris Codex.

℞ Balm leaves, fourteen parts.
Lemon-peel, twelve parts.
Coriander,
Nutmeg, each, six parts.

Cinnamon,
Cloves, each, three parts.
Alcohol, one hundred and fifty parts.
Water, two hundred and fifty parts.

Distil two hundred parts. *Ph. Germ.*

These are known as the *Eau des Carmes.* It is used as a perfume, stomachic, and stimulant.

℞ Compound spirit of balm, sixteen parts.
Spirit of mint,
" rosemary, each, twelve parts.
" sage, nine parts.
" thyme, eight parts.

Mix. This is known as *Eau de Dardel,* and is used as above. *Guibourt.*

Anti-Hysteric Water.

℞ Fresh balm, one pound.
Laurel berries,
Cumin, each, one ounce.
Myrrh, half an ounce.
Castor, two drachms.
White wine, twelve pounds.

Digest for some time, and distil off one-half. As a stimulant, and antispasmodic in hysteria. *Wirtemberg Ph.*

MENTHA PIPERITA.

Peppermint.

Many species of Mentha are used in medicine, but two only are recognized in our pharmacopœia; the *M. piperita* and *M. viridis;* both natives of Europe, and naturalized in this country.

Sex. Syst. Didynam. gymnos. *Nat. Syst.* Lamiaceæ.

Smith, Eng. Bot. x. 687. Griffith, Med. Bot. 502.

The whole plant is used it has a peculiar, aromatic odor, and a balsamic, pungent, camphorated taste, followed by a sensation of coolness. It is aromatic, carminative, and stimulant, and is much employed to expel flatus, obviate nausea, etc.

Oil of Peppermint.

℞ Peppermint, at will.
Water, sufficient.

Distil, and collect the oil that floats on the product. *U. S. Ph.*

Aromatic Species.

℞ Peppermint, Rosemary, Wild thyme, Marjoram, Lavender, each, two parts.
Cloves,
Cubebs, each, one part.

Cut and bruise separately, remove the fine powder, and mix. *Ph. Germ.*

The aromatics and the proportions vary in the different pharmacopœias.

Water of Peppermint.

℞ Oil of peppermint, half a fl. drachm.
Carbonate of magnesium, one drachm.
Distilled water, two pints.

Rub the oil with the carbonate of magnesium, and then with the water gradually added, and filter. *U. S. Ph.*

℞ Oil of peppermint, one fl. drachm and a half.
Water, fifteen pounds.

Distil ten pounds, *Brit. Ph. Paris Codex* directs to distil one part of water from one part of the fresh herb, *Ph. Germ.* ten parts, and *U. S. Ph.* fourteen parts of water from one part of dried peppermint.

Dose, a tablespoonful.

Spirit of Peppermint.

℞ Oil of peppermint, one fl. ounce.
Rectified spirit, forty-nine fl. ounces.

Dissolve. *Brit. Ph.*

Dose, from half to one fl. drachm.

℞ Oil of peppermint, one fl. ounce.
Peppermint, two drachms.
Alcohol, fifteen fl. ounces.

Mix, macerate for twenty-four hours, and filter. *U. S. Ph.*

Dose, from ten to thirty minims.

Essence of Peppermint.

℞ Oil of peppermint, one fl. ounce.
Rectified spirit, four fl. ounces.

Dissolve. Dose, five to fifteen minims. *Brit. Ph.*

The officinal spirit is known in this country as essence of peppermint.

Peppermint Lozenges.

℞ Oil of peppermint, one fl. drachm.
Mucilage of tragacanth, sufficient.
Sugar, twelve troyounces.

Mix, and form four hundred and eighty troches. *U. S. Ph.*

Carminative Mixture.

℞. Essence of peppermint, one fl. ounce.
Peppermint water, four fl. ounces.
Syrup of mallow, three fl. ounces.
Oil of cinnamon, two drops.
" peppermint, three drops.

Mix. A spoonful every two hours, in convulsive hiccough. *Alibert.*

℞. Magnesia, half a drachm.
Peppermint water, two and a half fl. drachms.
Compound spirit of lavender, half fl. drachm.
Spirit of caraway, four fl. drachms.
Syrup of ginger, two fl. drachms.

Mix. A teaspoonful occasionally, as an antacid and carminative. *Paris.*

MENTHA VIRIDIS.

Spearmint.

This species, like the last, although a native of Europe, has become extensively naturalized in many parts of the United States; principally in low, wet situations. It is less powerfully aromatic and pungent than peppermint, but is more agreeable in odor and taste to most persons. It has the same properties, and its preparations are the same as of that article.

The French and German pharmacopœias employ *M. crispa* and *M. crispata.*

Syrup of Mint.

℞. Mint, bruised, three parts.
Boiling distilled water, fifteen parts.

Macerate for several hours, and in ten parts of the strained liquid dissolve

Sugar, eighteen parts.

Dose, a tablespoonful. *Ph. Germ.*

Infusion of Mint.

℞. Dried spearmint, three drachms.
Boiling water, half a pint.

Infuse for fifteen minutes, and strain. *Dub. Ph.*

Compound Infusion of Mint.

℞. Dried spearmint, two drachms.
Boiling water, sufficient

to afford six fl. ounces of strained infusion. Add

Sugar, two drachms,
Oil of spearmint, three drops,

dissolved in

Compound tincture of cardamom, half a fl. ounce.

To allay nausea, etc. Dose, one to two fl. ounces. *Dub. Ph.* 1826.

℞. Dried mint, two ounces.
Red roses, four scruples.
Boiling water, one pint.
Diluted sulphuric acid, two fl. drachms.

Macerate for half an hour, strain, and add

Sugar, one ounce and a half,

and dissolve. *Guy's Hospital.*

Water of Spearmint.

℞. Oil of spearmint, half a fl. drachm.
Carbonate of magnesium, one drachm.
Water, two pints.

Rub the oil with the carbonate, then gradually with the water, and filter. Dose, a tablespoonful or more. *U. S. Ph.*

℞. Oil of spearmint, one fl. drachm and a half.
Water, fifteen pounds.

Distil ten pounds, *Brit. Ph.* *Paris Codex* directs to distil one part of water from one part of fresh, *Ph. Germ.* ten parts from one part of dry curled mint, *U. S. Ph.* fourteen parts from one part of dry spearmint.

Arquebusade Water.

℞. Dried mint,
" angelica tops, each, one pound.
" wormwood, half a pound.
Angelica fruit, five ounces.
Oil of juniper, half a drachm.
Spirit of rosemary, three pints and a half.
Rectified spirit, five gallons.
Water, four gallons.

Mix, and distil six gallons. Much celebrated as a vulnerary, for contusions, and for cleansing and healing ulcers and wounds, especially those caused by firearms. *Redwood.*

Essence (Spirit) of Spearmint.

℞. Oil of spearmint, one fl. ounce.
Alcohol, fifteen fl. ounces.
Spearmint, two drachms.

Mix, macerate for twenty-four hours, and filter. *U. S. Ph.*

Dose, ten to thirty minims.

The strength of spirits made with volatile oils, of *Brit. Ph.*, is one measure of the oil to forty-nine measures of alcohol.

MENYANTHES.

BUCKBEAN.—BOGBEAN.

The *M. trifoliata*, or buckbean, is an aquatic herbaceous plant, with ternate leaves, a native of both Europe and North America.

Sex. Syst. Pentand. monog. *Nat. Syst.* Gentianaceæ.

Linn. Sp. Pl. 207. Griffith, Med. Bot. 464.

All parts of the plant are medicinal, but the leaves only are employed and are recognized by several European pharmacopœias under the name of *Trifolium fibrinum*. They are very bitter, but have very little odor. In small doses, the buckbean is tonic and astringent, in large ones cathartic, and even emetic. As a tonic, the dose of the powdered leaves, or root, is from twenty to thirty grains.

Infusion of Buckbean.

℞ Buckbean, one ounce.
Boiling water, one pint.

Macerate for two hours, and strain. Dose, one to two fl. ounces. *Saunders.*

Extract of Buckbean.

℞ Clarified juice of buckbean, at will.

Evaporate to the proper consistence. *Guibourt.*

℞ Buckbean, cut, one part.

Digest first with six, afterwards with three parts of boiling water, each time for six hours; express, strain, and evaporate. *Ph. Germ.*

Dose, ten to fifteen grains.

Compound Pills of Buckbean.

℞ Extract of buckbean,
" valerian,
each, two drachms.
Soap, half an ounce.
Rhubarb, one drachm and a half.
Syrup, sufficient.

Mix, and make pills of two grains. Ten, three times a day, in a costive condition of the bowels. *Vogel.*

Mixture of Buckbean, Fumitory, etc.

℞ Extract of buckbean, } each,
" fumitory, } half an
" couch grass, } ounce.
Chamomile water, ten fl. ounces.
Compound infusion of horseradish, four fl. ounces.
Sulphuric acid, half a drachm.

Mix. Two tablespoonfuls a day as an antiscorbutic. *Selle.*

Bitter Elixir.

℞ Extract of buckbean,
" orange-peel,
each, two parts.
Peppermint water,
Alcohol, sp. gr. 0.92,
each, sixteen parts.
Spirit of ether, one part.

Dissolve and mix. *Ph. Germ.*

Dose, one-half to one teaspoonful.

Diuretic Mixture.

℞ Extract of buckbean, half an ounce.
Vinegar of squill, two fl. ounces.
Tincture of assafetida, half fl. ounce.

Mix. Dose, thirty drops three times a day, as a diuretic. *Augustin.*

MEZEREUM.

MEZEREON.

This is the bark of several species of *Daphne;* two species of which are officinal in the *U. S. Ph.*, the *D. mezereum*, and *D. gnidium*, both shrubs indigenous to Europe; the first being the most generally used.

Sex. Syst. Octand. monog. *Nat. Syst.* Thymelaceæ.

Linn. Sp. Pl. 509. Griffith, Med. Bot. 560.

The officinal portion is the bark. This, as found in the shops, is in long, narrow strips, of a grayish color and fibrous texture. It is almost inodorous, with a sweetish taste at first, soon becoming extremely acrid. It is used as an external irritant and stimulant, and internally as an alterative diaphoretic.

Decoction of Mezereon.

℞ Mezereon, two drachms.
Water, three pints.

Boil till reduced to a quart. Add

Liquorice root, half an ounce.

Strain. Four to eight fl. ounces a day. *Thomson.*

In syphilitic affections, especially when there are night-pains and eruptions.

Compound Decoction of Mezereon.

℞. Mezereon, two drachms.
Bittersweet, half an ounce.
Burdock, two ounces.
Water, four pints.

Boil down to three pints, and add

Liquorice root, two drachms.

Strain. In the same cases as above, and in obstinate diseases of the skin.

Van Mons.

Extract of Mezereon.

℞. Mezereon, finely cut, one part.
Alcohol, seven parts.

Digest for two days, first with four, and then with three parts of alcohol, express, filter, distil, and evaporate to a soft extract. *Ph. Germ.*

Ethereal Extract of Mezereon.

Macerate the extract obtained by the preceding process from one pound of mezereon, with twenty fl. ounces of ether for twenty-four hours, shaking frequently; decant the solution, distil and evaporate to a soft extract. *Brit. Ph.*

Fluid Extract of Mezereon.

℞. Mezereon, in powder,
No. 40, sixteen ounces.
Stronger alcohol, sufficient.

Moisten powder with six fl. ounces of the alcohol, pack firmly in a percolator, add ten fl. ounces of the alcohol, and macerate for four days; then displace twenty-four fl. ounces, reserving the first fourteen; evaporate the remaining ten to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

The last three preparations are excessively acrid, and are mainly employed in the preparation of ointments and liniments.

Mezereon Ointment.

℞. Fluid extract of
mezereon, four fl. ounces.
Lard, fourteen troyounces.
Yellow wax, two troyounces.

Melt lard and wax, add fluid extract, stir until alcohol has evaporated, and afterwards while cooling. *U. S. Ph.*

℞. Extract of mezereon, one part.
Wax ointment, nine parts.

Mix thoroughly. *Ph. Germ.*

Mezereon ointment of *Paris Codex* is almost identical with the foregoing.

Used as a stimulating application to blistered surface, and to indolent ulcers.

Plaster of Mezereon and Cantharides.

℞. Bruised mezereon, ten grammes.
" cantharides,
thirty grammes.
Acetic ether, one hundred grammes.

Macerate for eight days, express, filter, and dissolve in the filtrate

Sandarac, four grammes.
Elemi,
Resin, each, two grammes.

Spread this solution upon three hundred square centimetres of silk which has been previously coated with a solution of twenty grammes of isinglass. *Ph. Germ.*

MONARDA.

Horsemint.

Almost all the species of *Monarda* are possessed of medicinal properties, but one only is recognized as officinal, the *M. punctata.* This is a native, perennial, herbaceous plant, with yellow flowers, spotted with brown; usually growing in sandy soils.

Sex. Syst. Diand. monog. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 126. Griffith, Med. Bot. 510.

The whole plant is aromatic, and abounds in a pungent, volatile oil. It is used in infusion, for flatulent colic, and as an emmenagogue.

Oil of Horsemint.

℞. Fresh horsemint, at will.
Water, sufficient.

Distil, and collect the oil that floats on the product.

Internally, as a carminative, in doses of two or three drops, with sugar and water. Externally, as a rubefacient, in low states of fever, rheumatism, etc. In most cases it must be diluted.

Oil of Horsemint Liniment.

℞. Oil of horsemint, half an ounce.
Tincture of camphor, two ounces.
Laudanum, two drachms.

Mix. As a rubefacient application.

Atlee.

MONESIA.

Monesia.

This is an extract obtained from the bark of *Chrysophyllum glycyphlœum*, a tree growing in South America. It is in the form of hard, thick cakes, having at first a sweet taste, which soon becomes astringent and acrid. It is of a dark brown color, friable, and soluble in water. It has been used with success in various discharges, especially of a chronic character; in chronic bronchitis, etc., in doses of two to ten grains, frequently repeated; also as an application to atonic ulcers.

Purified Monesia.

℞. Monesia, bruised, one pound.
Boiling water, six pints.

Infuse for twenty-four hours, stirring occasionally; decant, and evaporate by a water-bath. *Beasley.*

Monesia Mixture.

℞. Monesia, two scruples.
Water, seven and a half fl. ounces.
Compound tincture of cardamom, half a fl. ounce.

Mix, and dissolve. Dose, a tablespoonful. *Neligan.*

Syrup of Monesia.

℞. Monesia, one drachm.
Water, one fl. drachm.
Boiling syrup, twelve fl. ounces.

Mix. Dose, half a fl. ounce. *Derosne.*

Compound Syrup of Monesia.

℞. Hot syrup of monesia, sixteen fl. ounces.
Orange-flower water, half a fl. ounce.
Extract of poppies, sixteen grains.

Mix. As above. *Derosne.*

Tincture of Monesia.

℞. Monesia, one ounce.
Diluted alcohol, nine and a half fl. ounces.
Water, two fl. ounces.

Macerate, and decant. *Donovan.*

℞. Monesia, half an ounce.
Alcohol, two fl. ounces.
Water, seven and a half fl. ounces.

St. Ange.

As above. Used in injections; half a drachm to a drachm, to six fl. ounces of water.

Monesia Ointment.

℞. Monesia, one drachm.
Lard, one ounce.

Mix. *St. Ange.*

℞. Monesia,
Water, each, one part.
White wax, two parts.
Oil of almonds, four parts.

Mix. *Derosne.*

As an application to indolent ulcers.

MORA.

Mulberries.

Two species of *Morus* produce fruit which appears to have identical properties; *M. nigra*, a native of Europe, which is officinal in some foreign pharmacopœias; and *M. rubra*, a native of the United States.

Sex. Syst. Monœc. tetrand. *Nat. Syst.* Moraceæ.

Mulberries are refreshing and laxative, and form the basis of a grateful drink in febrile cases.

Syrup of Mulberries.

℞. Mulberry juice, twenty fl. ounces.
Sugar, thirty-two ounces.
Alcohol, two and a half fl. ounces.

Heat the juice to the boiling point, cool, and filter. Dissolve the sugar with a gentle heat, and add the spirit. It should weigh fifty-four ounces, and have the sp. gr. 1.33. *Brit. Ph.*

As an addition to cooling drinks in fever.

Rob of Mulberries.

℞. Strained juice of mulberries, at will.

Evaporate to the consistence of honey. *Austr. Ph.*

Used as a detersive application to ulcers, and as an addition to gargles.

MORPHIA.

Morphia.

℞. Opium, sliced, twelve troyounces.
Distilled water, Alcohol, Animal charcoal, each, sufficient.
Water of ammonia, six fl. ounces.

Macerate the opium with four pints of the water, for twenty-four hours; and having worked it with the hand, digest for twenty-four hours, and strain. Operate on the resi-

due twice, in the same manner. Mix the infusions, evaporate to six pints, and filter; then add five pints of alcohol, and afterwards three fl. ounces of the water of ammonia mixed with half a pint of alcohol. Let rest for twenty-four hours, add the rest of the ammonia, mixed as before, and set aside for twenty-four hours, to crystallize. Purify the crystals by boiling them with two pints of alcohol, till dissolved, and filtering while hot through animal charcoal, and recrystallizing. *U. S. Ph.*

℞. Mix a concentrated infusion of opium with milk of lime (in which the lime is one-fourth the weight of the opium used); heat the mixture to boiling; filter, while boiling hot, through linen, and add an excess of chloride of ammonium. As it cools, the morphia is precipitated.

Mohr.

One-eighth of a grain is about equal in power to a grain of opium.

Anodyne Solution of Morphia.

℞. Morphia, one grain.
Wine vinegar, two grains.
Rectified spirit, twenty grains.
Chloroform, eighty grains.

Dissolve, and mix. Said to leave no unpleasant after-effects. Each drop contains $\frac{1}{300}$ grain of morphia.

Brit. Med. Journ. 1867.

Pills of Morphia.

℞. Morphia, one grain.
Conserve of roses, sufficient.

Mix, and make six pills. *Magendie.*

Morphia Draught.

℞. Morphia, a quarter of a grain.
Syrup of poppies, one drachm.
Distilled water, one fl. ounce.

Mix. At bedtime. *Brera.*

Injection of Morphia.

℞. Morphia, two grains.
Yolk of egg, one.
Oil of chamomile,
" poppies, each, one ounce.

Mix. To ease pain in earache, and used in acute gonorrhœa and hemorrhoids. *Brera.*

MORPHIÆ ACETAS.

Acetate of Morphia.

℞. Powdered morphia, one troyounce.
Distilled water, half a pint.
Acetic acid, sufficient.

Mix the morphia with the water, and drop in the acid, constantly stirring, till the morphia is saturated and dissolved. Evaporate to consistence of syrup on a water-bath. Dry by a gentle heat, and powder. *U. S. Ph.*

Dose, one-eighth to a quarter of a grain.

Solution of Morphia and Ipecacuanha.

℞. Acetate of morphia, one scruple.
Diluted acetic acid, one fl. drachm.
Water, two fl. ounces.
Wine of ipecacuanha, four fl. ounces.
Diluted alcohol, ten fl. ounces.

Mix. Dose, a teaspoonful, containing about one-sixth of a grain of the acetate, and one grain of ipecacuanha.

Compound Powder of Acetate of Morphia.

℞. Acetate of morphia, one grain.
Powdered foxglove, six grains.
Extract of pulsatilla, twelve grains.
Sugar, one drachm.

Mix, and form thirty-six powders. Four a day, in the cough and sleeplessness of consumptive patients. *Cadet.*

Bolus of Acetate of Morphia.

℞. Acetate of morphia, one grain.
Olive oil, ten drops.
Crumb of bread,
Honey, each, sufficient.

Mix, and make six boluses. *Brera.*

Troches of Acetate of Morphia.

They are to be made of white sugar, so that each contains five milligrammes ($\frac{1}{13}$ grain) of acetate of morphia. *Ph. Germ.*

Pills of Acetate of Morphia.

℞. Acetate of morphia, one grain.
Conserve of roses, sixteen grains.

Mix, and make eight pills. *Mialhe.*

℞. Acetate of morphia, one grain.
Golden sulphuret of antimony,
Extract of aconite, each, two grains.

Powdered liquorice,
Honey, each, sufficient.

Mix, and make eight pills. *Brera.*

℞ Acetate of morphia, one grain.
Powdered digitalis, six grains.
" camphor, ten grains.
" gum Arabic, eight grains.
Syrup of tolu, sufficient.

Beat into mass, and divide into six pills. One may be taken every three hours.
A. T. Thomson.

℞ Acetate of morphia, fifteen grains.
Ammonio-sulphate of copper, half a drachm.
Inspissated bile,
Powdered quassia, each, four scruples.

Mix, and make one hundred pills. Five, morning and evening, in diabetes mellitus.
Brendt.

Solution of Acetate of Morphia.

℞ Acetate of morphia, sixteen grains.
Acetic acid, two fl. drachms.
Distilled water, six fl. drachms.

Mix. Dose, six to twenty-four drops.
Dunglison.

℞ Acetate of morphia, four grains.
Dilute acetic acid, eight minims.
Distilled water, six fl. drachms.
Rectified spirit, two fl. drachms.

Mix. Dose, ten to sixty minims.
Brit. Ph.

Alcoholic Solution of Acetate of Morphia.

℞ Acetate of morphia, sixteen grains.
Alcohol, one fl. ounce.

Dissolve. *Cottereau.*

Syrup of Acetate of Morphia.

℞ Acetate of morphia, four grains.

Dissolve in a small portion of water, and a few drops of acetic acid, and add to
Syrup, sixteen troyounces.
Paris Codex.

Mixture with Acetate of Morphia.

℞ Solution of acetate of morphia, twenty drops.
Lactucarium, ten grains.
Infusion of chamomile, five ounces.
Syrup of marsh mallow, half on ounce.

Mix. Dose, a spoonful. *Béral.*

Clyster with Acetate of Morphia.

℞ Starch, one drachm.
Hot water, one pint.
Acetate of morphia, one grain.

Mix. In chronic diarrhœa. *Cadet.*

Ointment of Acetate of Morphia.

℞ Acetate of morphia, six to eight grains.
Lard, one to two drachms.

Mix. As a friction in violent rheumatic pains. *Foy.*

℞ Acetate of morphia, four grains.
Mercurial ointment,
Simple ointment, each, two drachms.

Mix. In frictions on the labia, twice a day, in cancer of the uterus. *Hildenbrand.*

MORPHIÆ BIMECONAS.

Bimeconate of Morphia.

℞ Meconic acid, two hundred grains.
Boiling water, sufficient.

Dissolve, and add
Morphia, sufficient

to saturate. (About 310 grains.) Evaporate to dryness. *Squire.*
Dose, one-fourth of a grain.

Solution of Bimeconate of Morphia.

℞ Bimeconate of morphia, ten grains.
Rectified spirit, one fl. drachm.
Distilled water, thirteen fl. drachms.

Mix. About the strength of laudanum.
Beasley.

MORPHIÆ CITRAS.

Citrate of Morphia.

℞ Morphia, sixteen grains.
Crystallized citric acid, eight grains.

Distilled water, one ounce,
colored with
Tincture of cochineal, two drachms.

Mix. Dose, six to thirty drops, in the twenty-four hours. *Magendie.*

MORPHIÆ HYDRIODAS.

Hydriodate of Morphia.

℞. Muriate of morphia, two parts.
Iodide of potassium, one part.

Make a strong solution of each, and mix; wash the precipitate in a little cold water, press in bibulous paper, redissolve in hot water, and let crystallize. *A. T. Thomson.*

MORPHIÆ MURIAS.

Muriate of Morphia.

℞. Morphia, in powder, one troyounce.
Distilled water, four fl. ounces.
Muriatic acid, sufficient.

Mix the morphia with the water, drop in the acid, constantly stirring, till the morphia is saturated and dissolved. Evaporate by means of a water-bath to crystallization. Dry upon bibulous paper. *U. S. Ph.*
Dose, one-eighth to half a grain.

℞. Opium, sliced, twelve ounces.
Chloride of calcium, three quarters of an ounce.
Purified animal charcoal, one quarter ounce.
Dilute hydrochloric acid, } each,
Water of ammonia, } sufficient.
Distilled water, }

Exhaust the opium by repeated maceration with water, evaporate to twenty fl. ounces, and strain; add the chloride of calcium dissolved in four fl. ounces of water, and evaporate until the mixture becomes solid on cooling. Express strongly and preserve the dark liquid. Triturate the cake with ten ounces of boiling water, filter, and wash residue well; evaporate the liquids, cool, and express the solid mass again, and, if much colored, repeat the same operation again. Now dissolve the cake in six fl. ounces of boiling distilled water, digest with the charcoal for twenty minutes, filter, wash, and mix with slight excess of ammonia. Collect the morphia, wash well, diffuse in two fl. ounces of boiling water, neutralize carefully with the muriatic acid, crystallize, drain, and dry. A small portion of pure morphia may be obtained from the dark liquids expressed as above, by diluting them with water, precipitating with excess of potassa, filtering, supersaturating with muriatic acid, treating with animal charcoal, and precipitating with ammonia. *Brit. Ph.*

Solution of Muriate of Morphia.

℞. Muriate of morphia, four grains.
Diluted hydrochloric acid, eight minims.
Rectified spirit, two fl. drachms.
Distilled water, six fl. drachms.

Mix the acid, spirit, and water, and dissolve the muriate in the mixture.
Brit. Ph.

Twenty minims contain one-sixth of a grain of the muriate, equal to about a grain of opium.

℞. Muriate of morphia, sixteen grs.
Distilled water, seven fl. drachms.
Alcohol, one fl. drachm.

Mix. Dose, six to twenty drops. *Cadet.*
This is of about the same morphia strength as Magendie's solution of sulphate of morphia.

Syrup of Muriate of Morphia.

℞. Muriate of morphia, one grain.
Distilled water, two scruples.
Syrup, four troyounces.

Dissolve in water and mix. Dose, a teaspoonful. As an expectorant.
Paris Codex.

Compound Syrup of Muriate of Morphia.

℞. Muriate of morphia, two grains.
Syrup of pinks, ten ounces.
" balm, four ounces.
" orange flowers, two ounces.

Mix. Dose, half an ounce to an ounce.
Cadet.

Mixture of Muriate of Morphia.

℞. Muriate of morphia, one or two grains.
Spirit of chloroform,
Compound tincture of cardamom, each, one fluidounce.

Mix. Dose, a dessertspoonful at bedtime, in insomnia. *Tanner.*

Pills of Muriate of Morphia.

℞ Muriate of morphia,
Milk sugar, each, fifteen grains.

Make, with honey, into one hundred pills, and roll them in powdered starch.
Paris Codex.

Lozenges of Muriate of Morphia.

℞ Muriate of morphia, one scruple.
Tincture of tolu, half a fl. ounce.
Powdered sugar, twenty-four ounces.
" gum Arabic, one ounce.

Dissolve the muriate in half an ounce of water, mix it and the tincture with the sugar and gum previously mixed, beat into a mass with mucilage, and divide into seven hundred and twenty lozenges. Each lozenge contains one-thirty-sixth of a grain of the muriate. *Brit. Ph.*

Lozenges of Muriate of Morphia and Ipecacuanha.

℞ Made as the last, with the addition of one drachm of ipecacuanha.

Dose, one to six lozenges. *Brit. Ph.*

Suppositories of Muriate of Morphia.

℞ Muriate of morphia, six grains.
Benzoinated lard, sixty-four grs.
White wax, twenty grains.
Oil of theobroma, ninety grains.

Triturate the morphia and lard, add to the melted wax and oil, and make twelve suppositories. *Brit. Ph.*

MORPHIÆ NITRAS.

NITRATE OF MORPHIA.

℞ Morphia, at will.
Dilute nitric acid, sufficient.

Saturate, dissolve, evaporate, and let crystallize. *Giordano.*

MORPHIÆ PHOSPHAS.

PHOSPHATE OF MORPHIA.

Make like the last, using dilute phosphoric acid instead of nitric.

MORPHIÆ SULPHAS.

SULPHATE OF MORPHIA.

℞ Morphia, in powder, one troyounce.
Distilled water, half a pint.
Diluted sulphuric acid, sufficient.

Mix the morphia with the water, drop in the acid, constantly stirring till the morphia is saturated and dissolved. Evaporate on water-bath and let crystallize. Dry crystals on bibulous paper. *U. S. Ph.*

Dose, one-eighth to half a grain.

Bolus of Sulphate of Morphia.

℞ Sulphate of morphia, two grains.
Oil of almonds, sufficient.
Sulphate of iron, four grains.
Crumb of bread,
Honey, each, sufficient.

Mix, and make eight boluses.

℞ Sulphate of morphia, one grain.
Ipecacuanha, three grains.
Oil of almonds, twelve drops.
Extract of aconite, two grains.
Liquorice powder,
Honey, each, sufficient.

Mix, and make six boluses. One, every three or four hours. *Brera.*

Pills of Sulphate of Morphia.

℞ Sulphate of morphia, two grains.
Cyanide of potassium, four grains.
Mucilage, sufficient.

Mix, and make twenty-four pills. One, every six hours, in neuralgia. *Rougier.*

℞ Sulphate of morphia, one grain.
Olive oil, sufficient.
Ipecacuanha, three grains.
Nux vomica, two grains.
Crumb of bread,
Honey, each, sufficient.

Mix, and make six pills. One, every two hours. *Brera.*

Troches of Morphia and Ipecac.

℞ Sulphate of morphia, twelve grs.
Ipecacuanha, in powder, forty grains.
Sugar, ten troyounces.
Oil of gaultheria, five minims.
Mucilage of tragacanth, sufficient.

Rub the powders together, then add the oil and mucilage, and divide into four hundred and eighty troches. *U. S. Ph.*

Solution of Sulphate of Morphia.

℞. Sulphate of morphia, eight grains.
Distilled water, half a pint.

Dissolve. *U. S. Ph.*

One fl. drachm contains an eighth of a grain.

Magendie's Solution.

℞. Sulphate of morphia, sixteen grains.
Distilled water, one ounce.

Mix. Dose, six to twenty drops. *Magendie.*

To prevent decomposition, Dr. Chr. Johnston adds three to five drops of sulphurous acid.

Syrup of Sulphate of Morphia.

℞. Sulphate of morphia, one grain.

Dissolve in a little water, and add to

Syrup, four ounces.

Each ounce contains one-quarter of a grain of sulphate. *Paris Codex.*

Lotion of Sulphate of Morphia and Borax.

℞. Sulphate of morphia, six grains.
Borax, half an ounce.
Rose water, eight fl. ounces.

Mix. As an application in pruritus vaginæ, washing first with tepid soap and water. *Meigs.*

Suppositories of Morphia.

℞. Sulphate of morphia, six grains.
Oil of theobroma, three hundred and fifty-four grains.

Make into twelve suppositories. *U. S. Ph.*

MORPHIÆ TARTRAS.

TARTRATE OF MORPHIA.

℞. Morphia, at will.

Saturate with

Solution of tartaric acid, sufficient.

Evaporate and crystallize. *A. T. Thomson.*

MOSCHUS.

MUSK.

This is a peculiar concrete substance obtained from the *Moschus moschiferus*, a small animal of the deer kind, inhabiting the mountainous regions of central Asia. The musk is secreted in the male, in an oval sac, situated near the generative organs. It is found in commerce in these sacs; it is concreted or granular; of a brownish color; soft and greasy to the touch; of a powerful, penetrating odor, and of a bitter, unpleasant, somewhat acrid taste. From its high price it is very liable to adulteration. It is antispasmodic and stimulant, and was formerly much used in spasmodic diseases of all kinds, as well as a stimulant in low states of the system. The dose is from five to ten grains.

Powder of Musk.

℞. Musk, three grains.
Opium, half a grain.
Gum Arabic, one scruple.
Sugar, two drachms.

Triturate together, and divide into six powders. One, every three hours, in hooping-cough. *Augustin.*

℞. Musk, sixteen grains.
Valerian, twenty-four grains.
Camphor, eight grains.

Mix. As an antispasmodic, in hysteria, etc.; in doses of three to twelve grains. *Guibourt.*

This is called by Jourdain *Tonquin powder*, but this name belongs rather to the following:—

℞. Musk, sixteen grains.
Cinnabar, twelve grains.

Mix. For a single dose. *Spielmann.*

Once celebrated as a remedy in hydrophobia.

Musk Bolus.

℞. Musk, five to ten grains.
Camphor, five grains.
Syrup, sufficient.

Make a bolus. Antispasmodic. *Ellis.*

℞. Musk,
Carbonate of ammonium, each, ten grains.
Conserve of roses, sufficient.

Make a bolus. One, every three hours. In mortification, attended with spasmodic action. *Ellis.*

Musk Pills.

℞. Musk, eight grains.
Opium, two grains.
Camphor, twenty-four grains.
Syrup, sufficient.

Mix, and form six pills. To be taken during the day, in hospital gangrene. *Dupuytren.*

℞ Musk, ten grains.
Camphor, one scruple.
Ammoniac, two scruples.
Opium, four grains.

Mix, and make pills of four grains. Four or five in the twenty-four hours, in nervous disorders. *Richard.*

℞ Musk, twelve grains.
Castor, twenty-four grains.
Assafetida, thirty grains.
Tincture of valerian, sufficient.

Make twenty-four pills. Four, three times a day, in nervous complaints. *Radius.*

Musk Mixture.

℞ Musk, two drachms.
Sugar,
Gum Arabic, each, one drachm.
Distilled water, six fl. ounces.

Mix. A tablespoonful, every hour or two, in low fevers. *Ellis.*

℞ Musk mixture, six fl. ounces.
Paregoric elixir, half fl. ounce.
Ammon. tincture of valerian, one fl. drachm.

Mix. A teaspoonful, three or four times a day, in pertussis in children. *Ellis.*

℞ Musk, two grains.
Fennel water, six fl. ounces.
Laudanum, ten drops.
Syrup of poppies, two drachms.

Mix. A spoonful, every hour, in trismus. *Chesselden.*

℞ Musk mixture,
Camphor water,
each, three fl. ounces and a half.
Syrup of ginger,
Spirit of sulphuric ether, each, two fl. drachms.

Mix. A tablespoonful, every three or four hours, in low fevers. *Ainslie.*

Musk Clyster.

℞ Musk, ten grains.
Valerian, half an ounce.
Starch, half a drachm.
Boiling water, eight ounces.

Mix. As an antispasmodic and excitant. *Radius.*

℞ Musk, twelve grains.
Sugar, two scruples.
Spirit of ammonia, thirty drops.
Infusion of flaxseed, four fl. ounces.

Mix. For children with convulsions. *Ellis.*

Tincture of Musk.

℞ Musk, one part.
Alcohol, of 80 per ct., ten parts.

Digest for ten days, and filter. Dose, thirty to sixty drops. *Paris Codex.*

℞ Musk, one part.
Water,
Alcohol, sp. gr. .892, each, twenty-five parts.

Triturate musk with the water, add the alcohol, macerate for a week, and filter. *Ph. Germ.*

MUCUNA.

Cowhage.

This is the bristles of the pods of *Mucuna pruriens*, a perennial, twining plant, native of the warmer parts of America, bearing curved brown pods, covered with short bristles, which, when dry, readily separate.

Sex. Syst. Diadelph. decand. *Nat. Syst.* Fabaceæ.

De Candolle, Prod. ii. 405. Griffith, Med. Bot. 242.

The pod is shaped somewhat like the italic *S*, and is covered with brown, bristly hairs, which adhere to any substance coming in contact with them. The hairs or spicula are possessed of anthelmintic powers, but whether they act mechanically or not, has not been fully ascertained, though the probability is that they do.

Electuary of Cowhage.

℞ Cowhage, two scruples.
Syrup, half an ounce.

Mix. A teaspoonful every morning, fasting, for three days, to be followed by a dose of castor oil; in cases of lumbrici. *Correa.*

℞ Cowhage, one drachm.
Honey, sufficient

to make electuary. To be given as above. *Ellis.*

Ointment of Cowhage.

℞ Cowhage, seven and a half grains.
Lard, one ounce.

Mix thoroughly.

This is used as a counter-irritant by rubbing it on the skin for ten or twenty minutes. *Blatin.*

MYRCIA.

Bay Myrtle.

A genus of shrubs and trees, with opposite entire leaves, which are pellucid-punctate, and, like the fruit, usually highly aromatic. The only officinal species is *M. acris*, a handsome tree of the West Indies.

Nat. Syst. Myrtaceæ.

The highly fragrant leaves yield on distillation with water, a volatile oil, known in this country as *oil of bay*, which resembles oil of allspice in odor, taste, and probably also in medicinal properties.

Spirit of Myrcia.
(Bay Rum.)

℞ Bay myrtle leaves, two pounds.
Allspice, half a pound.
Cinnamon, two ounces.
Cloves, one ounce and a half.
Rum, eighteen pints.

Distil twelve pints. Said to be the genuine bay rum of some West Indian islands.

℞ Oil of bay, ten fl. drachms.
Oil of allspice, one fl. drachm.
Acetic ether, two fl. ounces.
Alcohol, three gallons.
Water, two gallons and a half.

Mix, and filter after a fortnight. A good imitation. *Wilder.*

Used as a stimulating application to the skin and hair.

MYRISTICA.

Nutmeg.

The nutmeg is the kernel of the fruit of *Myristica fragrans* (or *M. moschata*), a medium-sized tree, a native of the Molucca Islands, and now cultivated in various tropical regions.

Sex. Syst. Diœc. monadelph. *Nat. Syst.* Myristicaceæ.

Thunberg, Act. Holm. 1782. Griffith, Med. Bot. 109.

The nutmeg is an oval, oblong nut-like seed, of a lightish-brown color externally, and of a reddish-gray with red veins, internally; of an agreeable, fragrant odor, warm, aromatic taste, and unctuous feel. It is principally used for culinary purposes, but is also employed in medicine as a stimulant, and to disguise the taste of nauseous remedies.

Volatile Oil of Nutmeg.

℞ Grated nutmeg, at will.
Water, sufficient.

Distil, and separate the oil. This is the *oleum myristicæ* of *Brit. Ph.* and *U. S. Ph.* Dose, one or two drops.

Expressed Oil of Nutmeg.

This is prepared by beating nutmegs to a paste, which is to be inclosed in a bag and then exposed to the vapor of water, and afterwards expressing the oil with heated plates. *Brit. Ph.*

It is the *oleum myristicæ* of *Ph. Germ.* and is ordinarily called *oil of mace.*

It is a fat oil mixed with a volatile oil, of a firm consistence and fragrant odor.

Nervine Balsam.

℞ Expressed oil nutmeg, four ounces.
Beef marrow, four ounces.

Melt together, and add

Oil of rosemary, two drachms.
" cloves, one drachm.
Camphor, one drachm.
Balsam of tolu, two drachms.

Dissolved in

Rectified spirit, four drachms.

As a liniment in rheumatism, etc. *Redwood.*

Cerate of Nutmeg.

℞ Yellow wax, one part.
Olive oil, two parts.
Expressed oil of nutmeg, six parts.

Melt and mix. This is the *Balsamum nucistæ*, much used in Europe in stimulating ointments and liniments. *Ph. Germ.*

Aromatic Plaster.

℞ Yellow wax, thirty-two parts.
Suet, twenty-four parts.
Turpentine, eight parts.

Melt together; when nearly cold, add

Expressed oil of nutmeg, six parts.
Powdered olibanum, sixteen parts.
" benzoin, eight parts.
Oil of peppermint,
" cloves, each, one part.

Mix intimately. *Ph. Germ.*

Aromatic Powder.

℞ Cinnamon,
Ginger, each, two troyounces.
Cardamom seed,
Nutmeg, each, one troyounce.

All in powder, No. 60; mix thoroughly. *U. S. Ph.*

Stimulant and carminative. Dose, ten to thirty grains.

Goelis's Antihectic Powder.

℞ Burnt hartshorn, Powdered nutmeg, Roasted laurel berries, each, one part.
Liquorice, three parts.

Mix, and make a powder. Advised in the hectic attendant on scrofulous affections, in doses of ten grains. *Augustin.*

Stimulating Clyster.

℞ Powdered nutmeg, one drachm.
" columbo, one drachm.
" salep, one scruple.
Infusion of flaxseed, four fl. ounces.

Mix. As a stimulating enema. *Ammon.*

Essence of Nutmeg.

℞ Volatile oil of nutmeg, one fl. ounce.
Alcohol, nine fl. ounces.

Mix, with agitation. Dose, twenty drops. *Dub. Ph.*

Spirit of Nutmeg.

℞ Volatile oil of nutmeg, one fl. ounce.
Stronger alcohol, three pints.

Dissolve. *U. S. Ph.*

Dose, half to one fl. drachm; principally used to flavor other medicines.

Compound Spirit of Nutmeg.

℞ Nutmeg, two ounces.
Lemon-peel, Orange-peel, Spearmint, Balm, each, one ounce.
Diluted alcohol, four pints.
Water, twelve pints.

Distil three pints. *Van Mons.*

As a stomachic, and an external application to contusions.

MYRRHA.

Myrrh.

Myrrh is the gum resin of *Balsamodendron Ehrenbergianum*, and probably also of *B. myrrha*, small shrubby trees, with spiny branches, natives of Arabia, etc.

Sex. Syst. Octand. monog. *Nat. Syst.* Amyridaceæ.

Nees, Offic. Pflanz. liv. 17. Griffith, Med. Bot. 171.

Myrrh occurs in tears, or in agglutinated masses, of various shades of color; the best is of a reddish-yellow color, somewhat translucent, having a peculiar, aromatic odor, and a warm, bitter taste. It is a stimulating tonic. It is given in a variety of diseases, and is used externally as an application to foul ulcers, aphthæ, etc. The dose is from ten to thirty grains, usually in combination.

Powder of Myrrh and Ipecacuanha.

℞ Powdered myrrh, twelve grains.
" ipecacuanha, six grains.
" nitre, half a drachm.

Mix, and divide into four powders. One every fourth hour. Stimulating expectorant. *Paris.*

Emmenagogue Powder.

℞ Myrrh, twelve grains.
Saffron, three grains.
Oil of cloves, one drop.

Rub into powder. *Augustin.*

Pills of Myrrh and Zinc.

℞ Sulphate of zinc, ten grains.
Powdered myrrh, one drachm and a half.
Conserve of roses, sufficient.

Mix, and form twenty pills. Two, twice a day. In pertussis. *Paris.*

Pills of Myrrh and Sulphate of Iron.

℞ Myrrh,
Sulphate of iron, each, two scruples.
Carbonate of potassium,
Soap, each, half a drachm.

Rub into mass, and form forty pills. Two thrice a day. In amenorrhœa. *Ellis.*

Pills of Myrrh and Squill.

℞ Myrrh, one drachm and a half.
Dried squill, half a drachm.
Extract of henbane, two scruples.
Distilled water, sufficient.

Rub into mass, and form thirty pills. Two night and morning. In catarrh and phthisis. *Paris.*

Pills of Myrrh and Canada Balsam.

℞ Myrrh, three drachms.
Canada balsam, one drachm and a half.
Opium, half a drachm.

Mix, and make pills of two grains. Two to four, every hour, in ulcerated phthisis. *Augustin.*

Alkaline Solution of Myrrh.

℞ Myrrh, two ounces.
Carbonate of sodium, one drachm.
Boiling water, eight fl. ounces.

Macerate for two days, and filter.
Swediaur.

Extract of Myrrh.

℞ Myrrh, bruised, one part.
Distilled water, two parts.

Macerate for two days, filter, evaporate to dryness, and powder. Dose, five to fifteen grains. *Ph. Germ.*

Compound Extract of Myrrh.

℞ Myrrh, two ounces.
Gum Arabic, two drachms.

Triturate together; add sufficient water to make a thick emulsion, and mix well with

Extract of couchgrass, four ounces.

Advised in phthisis, and ulcers of the uterus. Dose, one to three drachms, mixed with water, two or three times a day.
Swediaur.

Myrrh Collutory.

℞ Lime water, one fl. ounce and a half.
Tincture of myrrh, two fl. drachms.
Honey of roses, two drachms.

Mix. *Ph. Chirurg.*

℞ Tincture of myrrh, two fl. drachms.
Infusion of sage, six fl. ounces.
Honey of roses, two ounces.

Mix. *Augustin.*

Myrrh Gargle.

℞ Tincture of myrrh,
Vinegar, each, two fl. ounces.
Honey, one ounce.
Infusion of contrayerva, one pint and a half.

Mix. In putrid sore throat, scarlatina, etc.
Fothergill.

℞ Honey of roses, one ounce and a half.
Barley water, twelve fl. ounces.
Tincture of myrrh, six fl. drachms.
Vinegar, one fl. ounce.

Mix. As a gargle in putrid sore throat.
Ainslie.

Stimulating Injection.

℞ Myrrh, one ounce.
Quicklime, two ounces.
Water, two pints.

Infuse for a few days, and decant. As an injection in fistulous ulcers. *St. Marie.*

Tincture of Myrrh.

℞ Myrrh, in powder, No. 40, three troyounces.
Alcohol, sufficient.

Obtain by slow displacement two pints.
U. S. Ph.

The tincture of *Brit. Ph.* is of nearly the same strength. *Paris Codex* and *Ph. Germ.* prepare it from one part of myrrh, and five parts of alcohol.

Tincture of Myrrh and Hellebore.

℞ Tincture of myrrh, one fl. ounce.
" black hellebore, half a fl. ounce.
Tincture of Spanish flies, two fl. drachms.

Mix. As an emmenagogue, in doses of thirty drops, three times a day, in a little sugar and water. *Ellis.*

Griffith's Myrrh Mixture.

℞ Myrrh,
Sugar, each, one drachm.
Carbonate of potassium, twenty-five grains.

Rub together, and add, gradually,

Rose water, seven and a half fl. ounces.
Spirit of lavender, half a fl. ounce.

Then add

Crystallized sulphate of iron, rubbed to powder, one scruple.

Mix. As a tonic in phthisis, in tablespoonful doses, according to circumstances.
Ellis.

See also page 282.

Compound Mixture of Myrrh.

℞ Powdered myrrh, one drachm.
Carbonate of potassium, half a drachm.
Sulphate of iron, twelve grains.
Mucilage gum Arabic, two fl. drachms.
Decoction of liquorice, six and a half fl. ounces.
Spirit of allspice, one fl. ounce

Rub the myrrh, potassa, sulphate of iron, and mucilage, well together; add gradually the other ingredients. Dose, a tablespoonful twice or thrice a day. *Babington.*

Nearly the same as Griffith's mixture, and used in the same cases.

Oil of Myrrh.

℞ Myrrh, two parts.
Washed sand, three parts.

Distil, separate the oil that passes, and rectify it. *Wirt. Ph.*

Myrrh Plaster.

℞ Balsam of Peru, } each,
Camphor, } one ounce
Powdered myrrh, } and a half.
Lead plaster, thirty-two ounces.

Triturate the first three ingredients together, and when intimately mixed, add the melted plaster, and stir until chilled; then form into rolls of half a pound each.

Dentifrice of Tincture of Myrrh and Borax.

℞ Myrrh,
Borax, each, three parts.
Rhatany, one part.
Water,
Syrup, each, nine parts.
Cologne water, forty-eight parts.
Spirit of roses, one-quarter part.

Digest for ten days, and filter. *Dorvault.*

N.

NAPHTHALINA.

Naphthalin

Is a product of the distillation of coal tar, and is deposited from the rectified oil of coal tar, in white, shining, concrete crystals, and may be purified by dissolving in alcohol and recrystallizing. It is an active expectorant in doses of eight to thirty grains.

Syrup of Naphthalin.

℞ Naphthalin, fifteen grains.

Dissolve in smallest quantity of hot alcohol, and triturate with

Syrup, two troyounces.

Dose, a tablespoonful every two hours. *Dupasquier.*

Ointment of Naphthalin.

℞ Naphthalin, half to one drachm.
Lard, five drachms.

Mix. As an application in dry tetter, lepra, psoriasis, etc. *Boissière.*

Lozenges of Naphthalin.

℞ Naphthalin, five scruples.
Sugar, twenty ounces.
Oil of anise,
Mucilage of tragacanth,
each, sufficient.

Mix, and form lozenges of fifteen grains. Expectorant. One occasionally, to the amount of twenty a day. *Dupasquier.*

NARCOTINA.

Narcotia

Is a crystallizable, white, tasteless, inodorous principle, existing in opium. It forms bitter salts with the stronger acids. It has been used with success as an antiperiodic, in doses of three grains, three times a day.

It may be obtained by treating opium, or the extract of opium, with ether, or by the following process:—

℞ Residue of opium, exhausted by water, at will.

Dry it, powder it coarsely, add cold acetic acid, express, and filter; add an excess of ammonia, wash the precipitate with cold water, dissolve in boiling alcohol, decolorize by means of animal charcoal, let cool, and crystallize. *Pereira.*

Bolus of Narcotina.

℞ Narcotina, one scruple.
Oil of almonds, six drops.
Crumb of bread,
Honey, each, sufficient.

Mix, and make eight boluses. One, three times a day, in the apyrexia of intermittents. *Brera.*

Mixture of Narcotina.

℞ Narcotina, one drachm.
Lemon syrup, one fl. ounce.
Lemon water, two fl. ounces.

Mix. Dose, a dessertspoonful. *Brera.*

NARCOTINÆ MURIAS.

Muriate of Narcotina.

℞. Opium, two pounds.
Alcohol, twenty pounds.

Rub together, gradually adding the spirit, till the opium is exhausted, decant, and press residue; to solution add ammonia, till turbid. Distil off three-fourths of alcohol, and let the product cool; wash the deposit with water, and then with a drachm of muriatic acid mixed with a quart of water. Filter the solution, and evaporate to dryness. Dose, about the same as of narcotina.
O'Shaughnessy.

[See Dunglison's New Remedies, 6th edit. p. 536.]

NUX VOMICA.

Nux Vomica

Is the seed of the *Strychnos nux vomica*, a moderate-sized tree, a native of many parts of the East Indies, having a very bitter wood.

Sex. Syst. Pentand. monog. *Nat. Syst.* Loganiaceæ.

Linn. Sp. Pl. 271. Griffith, Med. Bot. 469.

The seeds are flat, peltate, with narrow annular striæ, somewhat downy on the surface; they are of a horny consistence, inodorous, and of a bitter, acrid, somewhat nauseous taste. Nux vomica is a violent excitant of the cerebro-spinal system, and in large doses an active poison. In small doses, frequently repeated, it is tonic, diuretic, and even laxative. It owes its energetic properties to the presence of strychnia and brucia. It is principally used in paralysis, in doses of about five grains, three or four times a day.

Powder of Nux Vomica.

℞. Powdered nux vomica, three grains.
Gum Arabic,
Sugar, each, twelve grains.

Mix. Advised in chronic dysentery. One, every day. *Soubeiran.*

℞. Powdered nux vomica, eighteen grains.
ipecacuanha, twenty-four grains.
" rhubarb, one drachm.
Prepared chalk, two scruples.
Oil of peppermint, two drops.

Mix. To be divided into twelve powders. One every three or four hours, in cardialgia, etc. *Vogt.*

Extract of Nux Vomica.

℞. Nux vomica, in powder,
No. 60, twelve troyounces.

Exhaust by percolation with alcohol, distil, and evaporate to the proper consistence.
U. S. Ph.

℞. Nux vomica, one pound.
Alcohol, sufficient.

Expose the nux vomica to steam, till softened, slice, dry, and reduce it to powder. Exhaust this by boiling with alcohol. Distil off the alcohol, and evaporate to a proper consistence. *Brit. Ph.*

Dose, half a grain to a grain.

Aqueous Extract of Nux Vomica.

℞. Nux vomica, in coarse powder, one part.

Digest first with four parts, next with three parts of water, pouring it upon the powder boiling hot; express, strain, and evaporate to dryness. Dose, one to three grains. *Ph. Germ.*

Tincture of Nux Vomica.

℞. Nux vomica, in powder, No. 60, eight troyounces.
Alcohol, sufficient.

Digest the powder with a pint of alcohol for twenty-four hours, then carefully displace two pints. *U. S. Ph.*

Dose, five to fifteen drops.

Paris Codex macerates with alcohol of .864, *Ph. Germ.* with alcohol of .892 sp. gr., both in proportion of five parts to one part of nux vomica. The tincture of *Brit. Ph.* is still weaker, two ounces of nux vomica being used to twenty fl. ounces of alcohol.

Ethereal Tincture of Nux Vomica.

℞. Powdered nux vomica, two ounces.
Spirit of nitrous ether, two pints.

Digest ten days, and filter. Dose, half a fl. drachm, in seminal debility. *Mettauer.*

℞. Nux vomica, in coarse powder, one part.
Spirit of ether, ten parts.

Macerate for a week, express, and filter.
Ph. Germ.

Compound Tincture of Nux Vomica.

℞. Extract of nux vomica, twenty-four grains.
Camphor, one drachm.
Tincture of pellitory, one fl. ounce.

Mix. Dose, twenty drops, four times a day, in paralysis. *Radius.*

℞. Tincture of nux vomica,
" Spanish flies,
each, one fl. drachm.
Phosphoric ether, one fl. scruple.

Mix. Thirty drops three or four times a day, in paralysis. *Radius.*

Pills of Nux Vomica.

℞. Powdered nux vomica,
thirty grains.
Conserve of roses, sufficient.

Mix, and make ten pills; one, twice or thrice a day, in paralysis, closely watching the effects. *Ellis.*

Pills of Extract of Nux Vomica.

℞. Extract of nux vomica,
one scruple.
" liquorice,
seven scruples.

Mix, and make eighty pills. Two to four, two or three times a day, in paralysis. *Radius.*

Compound Pills of Nux Vomica.

℞. Extract of nux vomica, six grs.
Black oxide of iron, one drachm.

Mix, and make twenty-four pills. Three a day, in atonic incontinence of urine. *Mondiere.*

℞. Extract of nux vomica,
three grains.
Nitrate of silver, four grains.
Extract of hops, twenty-four grs.

Make twelve pills. Dose, one thrice daily, in pyrosis, etc. *Barlow.*

Pills of Nux Vomica and Aloes.

℞. Extract of nux vomica, ten grains.
Pills of aloes and myrrh,
four scruples.

Mix well, and form thirty-six pills. One or two, night and morning. *Copland.*

Pills of Nux Vomica and Colocynth.

℞. Compound extract of
colocynth, two scruples.
Extract of nux vomica,
three grains.
Powdered soap, twelve grains.

Mix, and make twelve pills. Dose, one or two at bedtime, in habitual constipation. *Copland.*

Mixture of Nux Vomica.

℞. Extract of nux vomica, ten grains.
Elder water, six fl. ounces.
Mucilage of gum Arabic,
Syrup of mallow,
each, one fl. ounce.

Mix. A spoonful every two hours, in chronic dysentery. *Ammon.*

Lotion of Nux Vomica.

℞. Extract of nux vomica,
eight grains.
Alcohol, two fl. ounces.
Stronger water of
ammonia, half fl. ounce.

Mix. As a stimulating lotion to paralyzed limbs. *Radius.*

O.

OLEUM ANIMALE EMPYREUMATICUM.

Dippel's Animal Oil.

℞. Oil of hartshorn, at will.

Distil off one-fourth, by a slow heat, on a sand-bath, keeping it protected from the light. *Van Mons.*

Antispasmodic, diaphoretic, and anodyne, in doses of five or ten drops; poisonous in large doses.

Liniment of Dippel's Oil.

℞. Dippel's oil, one drachm.
Oil of almonds, six drachms.
Turpentine soap, half an ounce.

Mix. As an exciting liniment, also as an application to the abdomen, in cases of worms. *Sundelin.*

Tincture of Dippel's Oil.

℞. Dippel's oil, one part.
Ether, fifteen parts.

Dissolve. Fifteen to thirty drops, as a stimulant and antispasmodic. *Béral.*

Mixture of Dippel's Oil.

℞ Dippel's oil, one drachm.
Hoffmann's anodyne, three drachms.

Dissolve. Twenty to thirty drops, four times a day, in chorea and tetanus. *Radius.*

OLEUM CAJUPUTI.

Oil of Cajeput.

This is a fluid, transparent, green volatile oil, of an aromatic and pleasant odor, and a warm, pungent taste; obtained from the *Melaleuca cajuputi*, a small tree, a native of the Molucca islands.

Sex. Syst. Polyadelph. icosand. *Nat. Syst.* Myrtaceæ.

Maton, Lond. Pharm. 1800. Griffith, Med. Bot. 296.

It is also furnished by other species. It is an active stimulant, when given internally, in doses of a few drops, and acts as a rubefacient when applied to the skin.

Rectified Oil of Cajeput.

℞ Oil of cajeput, one part.
Water, six parts.

Distil as long as the oil comes over colorless, and separate from the water. *Ph. Germ.*

Mixture of Oil of Cajeput.

℞ Oil of cajeput, half a drachm.
Dippel's animal oil, one drachm.

Mix. As a stimulant. Dose, five to fifteen drops. *Augustin.*

Spirit of Cajeput.

℞ Oil of cajeput, one fl. ounce.
Alcohol, forty-nine fl. ounces.

Dissolve. Dose, half to one fl. drachm. *Brit. Ph.*

Cajeput Liniment.

℞ Cajeput oil,
Camphor, each, three drachms.
Soft soap, two ounces.
Alcohol, one pint.
Water of ammonia, two fl. ounces.

Mix. As an embrocation. *Chapman.*

℞ Oil of cajeput,
" turpentine,
Aconite liniment, } equal measures.

Mix. As an embrocation in chronic rheumatism. *Fuller.*

OLEUM MORRHUÆ.

Cod-liver Oil.

This, which is also called *Oleum jecoris aselli*, is procured from the livers of several kinds of fish, but principally from the Cod (*Gadus morrhua*), though that from the Ray is said to be preferable. There are several varieties; one, clear and limpid, the other dark-colored, and somewhat acrid, which is said by many writers to be the most powerful. The pale oil has a faint fishy smell, and a bland taste. It has obtained much celebrity as an alterative, in strumous affections; in chronic gout, rheumatism, and cutaneous diseases, etc. The dose for an adult, is from half a tablespoonful to three tablespoonfuls, two or three times a day.

Mixture of Cod-liver Oil.

℞ Cod-liver oil, one fl. ounce.
Gum Arabic,
Sugar, each, two drachms.
Cinnamon, or mint water, four fl. ounces.

Mix. One or two tablespoonfuls, morning and evening. *Ellis.*

℞ Cod-liver oil, four fl. ounces.
Solution of carbonate of potassium, half a fl. ounce.
Syrup of orange-peel, half a fl. ounce.
Peppermint water, seven fl. ounces.

Mix. Dose, one and a half fl. ounces to three fl. ounces. *Beasley.*

℞ Cod-liver oil, one fl. ounce.
Solution of carbonate of potassium, two fl. drachms.
Syrup of orange-peel, one fl. ounce.
Oil of calamus, three drops.

Mix. Dose, one to two fl. drachms, night and morning, for rickets in children. *Fehr.*

℞ Cod-liver oil,
Syrup of orange-peel,
Anise water, } each, one fl. ounce.
Oil of calamus, three drops.

Mix. Three spoonfuls a day, in rachitis and gouty swellings. *Phœbus.*

℞ Cod-liver oil, half a fl. ounce.
Solution of potassa, forty drops.
Peppermint water, half a fl. ounce.

Mix for a draught. This should be followed by a teaspoonful of lemon-juice to liberate the oil on the stomach. *Percival.*

Cod-liver Oil and Lacto-phosphate of Calcium.

℞ Cod-liver oil, eight fl. ounces.
Gum Arabic, two troyounces and two drachms.
Water, two fl. ounces.
Syrup of lacto-phosphate of calcium, six fl. ounces.
Oil of bitter almonds, six drops.

Rub the gum, water, and syrup together, add the oil gradually, and lastly the oil of bitter almonds. *E. Chiles.*

℞ Cod-liver oil, one pint.
Oil of bitter almonds, " peppermint, " wintergreen, each, ten drops.
Powdered gum Arabic, four troyounces.
Powdered sugar, six troyounces.
Solution of lacto-phosphate of calcium (containing one drachm in the fl. ounce),
Lime water, each, six fl. ounces and a half.

Mix gum, sugar, lime water, and three fl. ounces of the solution to a smooth mucilage, add the mixed oils gradually, make emulsion, and triturate with remainder of solution. *Shinn.*

Cod-liver Oil and Ether.

℞ Cod-liver oil, three fl. ounces.
Ether, two to four fl. drachms.

Mix. A dessertspoonful twice or three times a day. The ether masks the unpleasant taste of the oil, and places it in a state of fine division. *Foster.*

Syrup of Cod-liver Oil.

℞ Cod-liver oil, eight parts.
Powdered gum Arabic, five parts.
Simple syrup, four parts.

Make an emulsion, and add

Sugar, twenty-four parts.

Dissolve by gentle heat, and add

Orange-flower water, two parts.
Duclou.

Pills of Cod-liver Oil.

℞ Cod-liver oil, five drachms.
Water, ten grains.
Caustic soda, forty grains.

Heat together, and with powdered tragacanth form mass, to be divided into one hundred pills, each of which contains three grains of the oil. *Deschamps.*

Liniment of Cod-liver Oil.

℞ Cod-liver oil, one fl. ounce.
Water of ammonia, half a fl. ounce.

Mix. *Brach.*

Cod-liver oil, four fl. drachms.
Lead water, two fl. drachms.
Yolk of egg, three drachms.

Mix. As an application to ulcers, etc.
Brefeld.

Ointment of Cod-liver Oil.

℞ Cod-liver oil, three fl. ounces.
Sparmaceti, six drachms.
White wax, two drachms.

Melt together, and stir till cold. *Beasley.*

℞ Caustic soda, one ounce.
Water, two fl. ounces and a half.

Dissolve, and add

Cod-liver oil, eight fl. ounces.

Agitate briskly. *Deschamps.*

℞ Cod-liver oil, ten parts.
Lead water, five parts.
Lard, ten parts.

Mix. *Brefeld.*

Compound Ointment of Cod-liver Oil.

℞ Cod-liver oil, one fl. drachm.
Red oxide of mercury, four grains.
Simple cerate, two scruples.

Mix. *Cunier.*

℞ Cod-liver oil, three drachms.
Extract of wood soot, two drachms.
Citrine ointment, one drachm.
Beef marrow, six ounces.

Mix. *Carron.*

In opacities of the cornea, and scrofulous ophthalmia.

Compound Oil of Cod Liver.

℞ Cod-liver oil, one fl. drachm.
Walnut oil, two fl. drachms.

Mix. A drop or two to be introduced between the eyelids in opacities of the cornea. *Radius.*

OLEUM OLIVÆ.

Olive Oil.

The oil of the fruit of *Olea Europœa*, a small tree, originally from Syria, but now extensively cultivated in the countries bordering on the Mediterranean.

Sex. Syst. Diand. monog. *Nat. Syst.* Oleaceæ.

Linn. Sp. Pl. 11. Griffith, Med. Bot. 442.

Good olive oil is an unctuous fluid, of a pale yellow or greenish color; almost inodorous, and of a bland taste. It is principally used as an article of food, but is also employed in medicine as a demulcent, emollient, and laxative, and in the composition of liniments, ointments, etc. The dose, as a laxative, is about a fl. ounce.

Olive Oil Mixture.

℞ Syrup of gum, four fl. ounces.
Olive oil, half fl. ounce.

Mix. As a laxative. *Radius.*

℞ Olive oil, eight fl. ounces.
Aromatic spirit of ammonia, two fl. drachms.

Mix. Three tablespoonfuls night and morning, as an anthelmintic. *Ellis.*

℞ Olive oil, one fl. ounce.
Solution carbonate of potassium, half fl. drachm.
Mint water, seven fl. ounces.

Mix. *Guy's Hosp.*

℞ Olive oil, one fl. ounce.
Liquid carbonate of ammonium, one fl. drachm.
Mint water, seven fl. ounces.

Mix. *Guy's Hosp.*

Olive Oil Clyster.

℞ Common salt, one tablespoonful.
Olive oil,
Molasses, each, two tablespoonfuls.
Warm water, one pint.

Mix. *U. S. Dis.*

℞ Manna, one ounce.
Compound decoction of chamomile, ten fl. ounces.

Dissolve, and add

Olive oil, one fl. ounce.
Sulphate of magnesium, half an ounce.

Mix. *Dub. Ph.* 1826.

OLEUM RICINI.

Castor Oil.

The oil of the seeds of *Ricinus communis*, a perennial tree in tropical countries, but an annual herbaceous plant in temperate latitudes. The seeds are ovate, compressed, bean-like, of a grayish-ash-color, marbled with reddish-brown, not unlike the dog-tick in appearance.

Sex. Syst. Monœc. monad. *Nat. Syst.* Euphorbiaceæ.

Linn. Sp. Pl. 1430. Griffith, Med. Bot. 599.

The oil, which is generally obtained by expression, is a thick, viscous, colorless fluid, with a faint but unpleasant odor, and a mild but nauseous taste, followed by a slight sensation of acridity. It is a mild but prompt cathartic, acting rather as an evacuant than as an excitant of the alvine secretions. The dose is about a fl. ounce; for infants, from one to four fl. drachms. Its disgusting taste is best disguised by mixing it with froth of porter.

Oleaginous Mixture.

℞ Castor oil, one ounce.
Gum Arabic, seven scruples.
Mint water, half an ounce.
Water, two ounces.
Syrup, one ounce.

Make an emulsion. *Paris Codex.*

In some cases, as in dysentery, it is of benefit to add thirty or forty drops of laudanum to the mixture.

℞ Castor oil,
Mucilage of gum Arabic,
Syrup of orgeat, each, two ounces.
Water, ten fl. ounces.

Make an emulsion. Dose, as last. *Béral.*

℞ Castor oil, one ounce.
Yolk of egg, one.
Orange-flower water,
Simple syrup, each, half an ounce.
Water, two ounces.

Make an emulsion. *Cottereau.*

℞ Castor oil, eleven drachms.
Powdered tragacanth, half a drachm.
White sugar, seventy-five grains.

Water, two and a half fl. ounces.
Syrup of orange flowers, six fl. drachms.

Triturate the tragacanth with the sugar; add the syrup, and rub well in a mortar until the mucilage begins to thicken, then add the oil, and continue rubbing till it is homogeneous, adding the water gradually during the process. *Manne.*

Emulsion of Castor Oil Seed.

℞. Castor oil seed, half an ounce.
Anise water, four fl. ounces.
Sugar, two drachms.

Deprive the seeds of their exterior coat, triturate them to a uniform pulp with a little water and the sugar, and finally add the remainder of the water gradually, and strain through a coarse cloth. The seeds are more acrimonious than the oil, wherefore it is better to commence this preparation in small doses. Dose, a teaspoonful, to be gradually increased to a tablespoonful.
W. Procter, Jr.

Anthelmintic Emulsion.

℞. Castor oil,
Mucilage of gum Arabic, each, one ounce.
Syrup of Corsica moss, } each,
Water of santonica, } two fl.
" chamomile, } ounces.
Emulsion of sweet almonds, eight fl. ounces.

Mix, and make an emulsion. As an anthelmintic. Dose, a fl. ounce. *Béral.*

Castor Oil Clyster.

℞. Castor oil, one ounce and a half.
Yolk of eggs, two.
Infusion of chamomile, six fl. ounces.

Mix. *Radius.*

Mixture of Castor Oil and Ether.

℞. Castor oil, one ounce.
Ether, two drachms.

Mix. A spoonful every two hours, advised as an anthelmintic, in cases of tapeworm.
Radius.

Bandoline.

℞. Castor oil, two ounces.
Spermaceti, one drachm.
Arnotta, half a drachm.
Oil of bergamot, one drachm.
Otto of roses, five drops.

Mix, melt by a moderate heat, and strain. To stiffen and keep hair in form. *Redwood.*

OLEUM TEREBINTHINÆ.

Oil of Turpentine.

This is usually known as *Spirits of Turpentine*, and is the volatile oil obtained from the turpentine afforded by several species of Pinus. It is limpid, colorless, of a strong, penetrating, peculiar odor, and of a warm, pungent, somewhat bitterish taste. It is stimulant, diuretic, anthelmintic, and cathartic, and externally, rubefacient.

Rectified Oil of Turpentine.

℞. Oil of turpentine, one part.
Water, six parts.

Distil as long as the oil comes over colorless, and separate it from the water.
Ph. Germ.

For internal use.

Purified Oil of Turpentine.

℞. Oil of turpentine, eight parts.
Alcohol, one part.

Agitate together, and pour off the spirit, and repeat the process several times.
Nimmo.

Lotion for Chilblains.

℞. Oil of turpentine, four parts.
Sulphuric acid, one part.
Olive oil, ten to twenty parts.

Mix. To be applied to the affected part, night and morning. *Gassicourt.*

Confection of Turpentine.

℞. Oil of turpentine, one fl. ounce.
Powdered liquorice root, one ounce.
Clarified honey, two ounces.

Rub oil with the powder, afterwards with the honey, and mix thoroughly. Dose, one to two drachms. Used like the next.
Brit. Ph.

Oil of Turpentine and Honey.

℞. Oil of turpentine, two fl. drachms.
Honey, one fl. ounce.

Mix. A teaspoonful night and morning, in warm tea. In sciatica. *Ellis.*

Lotion for Toothache.

℞. Oil of turpentine, one fl. drachm and a half.
Oil of cloves,
Oil of cajeput,
each, half a fl. drachm.
Balsam of Peru, two drachms.
Opium, two scruples.

To be well rubbed together. As an application to the face, in cases of toothache. *Beasley.*

Odontalgic Solution.

℞. Camphor, one part.
Oil of turpentine, four parts.

Dissolve. Apply to the decayed tooth. *Chapman.*

Turpentine Emulsion.

℞. Oil of turpentine,
Water, each, one fl. ounce.
Powdered gum Arabic, one scruple.

Pour the oil into a vial, agitate with the powder, and afterwards with the water gradually added. *J. W. Forbes.*

Vermifuge Emulsion.

℞. Oil of turpentine, six fl. drachms.
Gum Arabic, two drachms.
Chamomile water, six fl. ounces.
Sulphuric ether, two fl. drachms.

Mix. Two spoonfuls night and morning, in cases of tapeworm. *Radius.*

Oil of Turpentine Mixture.

℞. Oil of turpentine, one hundred and twenty drops.
Powdered gum Arabic,
" sugar,
each, two drachms.
Laudanum, sixty drops.
Compound spirit of lavender, two fl. drachms.
Mint water, five fl. ounces.

Mix. A tablespoonful every two hours, in low forms of fever, etc. *Ellis.*

℞. Oil of turpentine, one fl. ounce.
Powdered gum Arabic,
" sugar,
each, two drachms.
Mint water, four fl. ounces.

Mix. A tablespoonful every two hours till it operates. An active purgative. *Frank.*

℞. Oil of turpentine, three fl. drachms.
Yolks of eggs, two.
Syrup of mint, two fl. ounces.
" orange flowers,
Ether, each, one fl. ounce.
Tincture of cinnamon, half a fl. drachm.

Mix. A spoonful three times a day, in neuralgia and rheumatism. *Foy.*

℞. Oil of turpentine, one fl. ounce.
Yolk of egg, one.

Triturate together, and add, gradually,

Emulsion of almonds, four fl. ounces.
Syrup of orange, two fl. ounces.
Compound spirit of lavender, four fl. drachms.
Oil of cinnamon, four drops.

One fl. ounce three times a day, advised as a purge in iritis. *Carmichael.*

℞. Honey,
Oil of turpentine,
Ammoniated tincture of guaiacum, } each, two drachms.
Oil of cloves,
" lemon, each, three drops.

Mix. A teaspoonful twice or three times a day, in sciatica and lumbago. *Copland.*

Ointment of Turpentine.

℞. Oil of turpentine, one fl. ounce.
Resin, in coarse powder, sixty grains.
Yellow wax,
Prepared lard, each, half an ounce.

Melt by a steam or water-bath, and stir constantly while cooling. *Brit. Ph.*

Turpentine Clyster.

℞. Oil of turpentine, one fl. ounce and a half.
Yolk of egg, one.
Tepid infusion of flaxseed, one pint.

Mix. *Ellis.*

℞. Oil of turpentine, one fl. ounce.
Mucilage of starch, fifteen fl. ounces.

Mix. *Brit. Ph.*

Turpentine and Ether.

℞. Oil of turpentine,
Ether, equal parts.

Mix. Dose, twenty to forty drops, in honey or syrup, in biliary calculi, and as an external application in rheumatism.
Cottereau.

Turpentine Liniment.

R. Oleo-infusion of chamomile,
Oil of turpentine, equal parts.
Mix. *Paris Codex.*

R. Oil of turpentine,
" olives, each, two fl. ounces.
Tincture of camphor, one fl. ounce.
Water of ammonia, one fl. drachm.
Mix. As an external rubefacient. *Ellis.*

R. Soft soap, two ounces.
Camphor, one ounce.
Oil of turpentine, sixteen fl. ounces.
Mix. A powerful rubefacient. *Brit. Ph.*

R. Oil of turpentine, half a pint.
Resin cerate, twelve troyounces.
Melt the cerate and add the turpentine.
U. S. Ph.
This is known as *Kentish's ointment*, and is much used as an application to burns and scalds.

Acetic Turpentine Liniment.

R. Oil of turpentine,
Acetic acid,
Liniment of camphor, } each, one fl. ounce.
Mix. *Brit. Ph.*

R. Oil of turpentine, three fl. ounces.
Acetic acid, five fl. drachms.
Rose water, two and a half fl. ounces.
Essence of lemon, four fl. scruples.
Yolk of egg, one.
Mix. As an external embrocation and liniment to phthisis. *Stokes.*

Opiated Turpentine Liniment.

R. Oil of turpentine, one fl. ounce.
" chamomile, two fl. ounces.
Laudanum, one fl. drachm.
Mix. As a lotion in neuralgia. *Recamier.*

Starkey's Soap.

R. Dry carbonate of potassium,
Oil of turpentine,
Turpentine, } equal parts.
Mix the potassa with the oil, then add the turpentine, and triturate till the mixture is of the consistence of honey. Used in dropsy and in gonorrhœa. Dose, eight to ten grains. *Guibourt.*

Diuretic Wine.

R. Oil of turpentine, two fl. drachms.
Lemon juice, one fl. ounce.
Wine, four fl. ounces.
Mix. For a single dose. *Pierquin.*

OLEUM TIGLII.

Croton Oil.

This oil is procured, for the most part, from the seed of the *Croton tiglium*, but also from those of two or three other species. They are all natives of India, and the adjoining parts of Asia. The *C. tiglium* is a moderate-sized shrub, bearing a somewhat triangular nut, containing three ovoid seeds, of a reddish-brown color, having an oleaginous kernel, which affords, on pressure, the oil in question.

Sex. Syst. Monœc. monadelph. *Nat. Syst.* Euphorbiaceæ.

Linn. Sp. Pl. 1426. Griffith, Med. Bot. 597.

The oil, when pure and fresh, is nearly colorless, or yellowish; but when kept for some time becomes of a reddish-brown or orange color. It has a faint but peculiar smell, and an acrid and hot taste. It is a powerful hydragogue purgative, and has been much used in dropsy, apoplexy, and visceral obstructions; when applied externally it causes irritation and inflammation of the skin, followed by a pustular eruption; and has been successfully employed in rheumatism, neuralgia, and bronchial and pulmonary affections. Dose for an adult, one to two drops.

Bolus of Croton Oil.

R. Croton oil, one drop.
Powdered gum Arabic, half a drachm.
Syrup of orange flowers, sufficient.
Mix, and make four boluses. Two to four to be taken in the morning. *Foy.*

Pills of Croton Oil.

R. Croton oil, six drops.
Soap, half a drachm.
Oil of caraway, eight drops.
Powdered liquorice root, sufficient.
Mix, and make twelve pills. Dose, one or more. *Reece.*

R. Croton oil, six drops.
Pills of aloes and myrrh, one drachm and a half.

Soap, one scruple.
Powdered liquorice root, sufficient.
Mix, and make thirty pills. Dose, two to three, or more. *Copland.*

℞. Croton oil, one drop.
Crumb of bread, sufficient.
Mix, and make four pills. One, every hour, until they operate. *Ellis.*

℞. Croton oil, two drops.
Soap, two grains.
Gum Arabic, sufficient.
Mix, and make four pills. *Foy.*

Compound Croton Oil Pills.

℞. Powdered scammony,
" aloes, each, sixty-four parts.
Croton oil, three parts.
Alcohol, four parts.
Dissolve the oil in the alcohol; add the solution, gradually, to a mixture of the powders, and beat into a mass. Divide into pills of five grains. One to three for children of fourteen years of age; three to five for adults. *Béral.*

Pills of Croton Oil and Quinia.

℞. Croton oil soap, three grains.
Sulphate of quinia, one drachm.
Extract of dandelion, sufficient.
Mix, and make twenty pills. One for a dose. *Caventou.*

Pills of Croton Oil and Blue Mass.

℞. Croton oil soap, three grains.
Extract of henbane,
Blue mass, each, twenty-four grains.
Oil of pimento, twelve minims.
Mix, and make twelve pills. Two at bedtime. *Neligan.*

Lozenges of Croton Oil.

℞. Vanilla chocolate, two drachms.
Sugar, one drachm.
Starch, one scruple.
Croton oil, five drops.
Mix, and make thirty lozenges. *Soubeiran.*

Soap of Croton Oil.

℞. Croton oil, two parts.
Solution of caustic soda, one part.
Mix; put into paper moulds; in a few days slice, and keep in well-stopped bottles. Dose, one to three grains, in pills. *Foy.*

Tincture of Croton Oil.

℞. Croton oil, sixteen drops.
Alcohol, one ounce.
Macerate for six or eight days, and filter. Dose, fifteen to twenty-five drops. *Soubeiran.*

℞. Croton oil, four drops.
Tincture of myrrh, one fl. ounce.
Mix, digest, and filter. Dose, one to two fl. drachms. *Bateman.*

℞. Croton oil, eight drops.
Alcohol, one fl. ounce.
Mix, digest, and filter. Dose, half to one fl. drachm. *Nimmo.*

Emulsion of Croton Oil.

℞. Croton oil, three drops.
Almond oil, half a fl. ounce.
Powdered gum Arabic, two drachms.
Triturate well, and gradually add
Syrup of orange flowers, one fl. ounce.
Chamomile water, five fl. ounces.
A tablespoonful every two hours, till it operates. *Phœbus.*

℞. Croton oil, one drop.
Yolk of egg, two drachms.
Orange-flower water,
Mint water, each, one ounce.
Make an emulsion. *Foy.*

Mixture of Croton Oil.

℞. Croton oil, one or two drops.
Mucilage of gum Arabic,
Distilled water, each, one fl. ounce.
Mix. A teaspoonful every two hours, until it operates. *Ellis.*

℞. Croton oil, two drops.
White sugar, two drachms.
Gum Arabic, half a drachm.
Tincture of cardamom, half a fl. drachm.
Distilled water, one fl. ounce.
Mix. Dose, two dessertspoonfuls every three or four hours. As it is agreeable to the taste, it is suited to children, but in smaller doses. *Béral.*

℞. Tincture of croton oil, twenty-five drops.
Mucilage of gum Arabic, one drachm.
Water, one ounce.
Mix. In the morning, fasting. *Foy.*

Saponaceous Solution of Croton Oil.

℞. Croton oil, eight drops.
Potassa, six grains.
Distilled water, two fl. drachms.
Mix. From three to six drops may be given for a dose. *Ellis.*

Liniment of Croton Oil.

℞. Croton oil, one fl. ounce.
Oil of cajeput,
Rectified spirit, each, three and a half fl. ounces.
Mix. *Brit. Ph.*

℞. Croton oil, one part.
Olive oil, five parts.
Mix. *Pereira.*

℞. Croton oil, one fl. drachm.
Oil of turpentine, one fl. ounce.
Mix. *Corrigan.*

℞. Croton oil, four drops.
Carbonate of sodium, ten grains.
Spirit of mint, half an ounce.
In friction, in rheumatism. *Foy.*

℞. Croton oil,
Solution of potassa, each, half fl. drachm.
Rose water, two fl. ounces.
Mix. To be used twice a day till pustules appear. *J. Allen.*

Embrocation of Croton Oil.

℞. Croton oil, twenty minims.
Tartar emetic, one scruple.
Solution of potassa, one fl. drachm.
Water, eight fl. drachms.
Mix. To keep up a mild eruption on the skin. *Morris.*

Ointment of Croton Oil.

℞. Croton oil, fifteen minims.
Lard, half an ounce.
Mix. *Niemeyer.*

Cerate of Croton Oil.

℞. Lard, two and a half parts.
Wax, half a part.
Mix together, and when nearly cold, mix with them
Croton oil, one part. *Caventou.*

℞. Soap cerate, four parts.
Melt, and when semifluid, add
Croton oil, one part. *Beasley.*

Plaster of Croton Oil.

℞. Lead plaster, four parts.
Melt, and when nearly cold, add
Croton oil, one part.
Spread on linen, for an adhesive and irritating plaster. *Bouchardat.*

℞. Lead plaster, eighty parts.
Melt, and when nearly cold, add
Croton oil, twenty parts.
To be spread as above. A very active counter-irritant. *Bouchardat.*

Ointment of Croton Oil.

℞. Croton oil, ten minims.
Lard, half an ounce.
Mix. *Ainslie.*

OPIUM.

Opium.

Opium is the inspissated juice obtained from the unripe capsules of the *Papaver somniferum* by incision and spontaneous evaporation; it presents many varieties, as the Turkey or Smyrna, the East Indian or Bengal, the Persian, etc.; of which the first is the best, and affords the largest proportion of morphia.

Opium contains various peculiar principles, several of which are officinal, and are treated of under their respective titles. Turkey opium is in flattened, rounded masses, of half a pound to two pounds in weight, covered externally with the seed-vessels of some species of dock. The texture is soft; the color is pale brown; the odor is strong and narcotic, and the taste bitter and acrid. When completely dried at 212°, it should contain ten per cent. of morphia.

Opium is stimulant, in small and repeated doses, narcotic in large; and also antispasmodic, diaphoretic, sedative, and anodyne. It is used to fulfil a variety of indications; to procure sleep, to lull pain, to check morbid discharges, to alleviate cough, etc. The medium dose is one grain, but in spasm, etc., it is given in much larger doses.

Extract of Opium.
(Aqueous.)

Opium, twelve troyounces.
Water, five pints.

Cut the opium into small fragments, macerate it for twenty-four hours in a pint of water, triturate to a soft mass, and express; add another pint of water to the residuum, macerate for twenty-four hours, and again express; repeat this process till all the water has been used. Filter the several infusions, unite them, and evaporate on a water-bath to due consistence. *U. S. Ph.*

Dose, half to one grain.

Liquid Extract of Opium.

℞ Extract of opium, one ounce.
Distilled water, sixteen fl. ounces.
Rectified spirit, four fl. ounces.

Dissolve the extract in the water by maceration, add the spirit, and filter. Dose, ten to thirty minims. *Brit. Ph.*

Extract of Opium.
(Aqueo-Alcoholic.)

℞ Opium, one part.
Alcohol, four parts.

Cut the opium in small pieces, and digest it in the alcohol for two days, at a gentle heat; express, and treat the residue with four parts of warm water; express, unite the solutions, and evaporate to due consistence. *Taddei.*

Extract of Opium.
(Acetous.)

℞ Opium, one ounce.
Distilled vinegar, two pints.

Cut the opium into small pieces, digest in the vinegar for two days, on a sand-bath, stirring from time to time, decant, filter, and evaporate to due consistence. *Soubeiran.*

Extract of Opium.
(Alcoholic.)

℞ Opium, at will.
Alcohol, sufficient.

Reduce the opium to small pieces, digest in the alcohol in a closed vessel, by a gentle heat, often stirring, filter, and distil off the alcohol, till the residue is of due consistence. *Antwerp Ph.*

Extract of Opium.
(Vinous.)

℞ Opium, one part.
White wine, four parts.

Reduce the opium to small pieces, macerate it in the wine for twenty-four hours, occasionally stirring; express. Macerate the residue in two more parts of wine, and express; unite the solutions, and evaporate to proper consistence. *Paris Codex.*

Extract of Opium.
(Denarcotized.)

℞ Aqueous extract of opium, at will.

Rub it with a little water, put it in a flask, add sulphuric ether, agitate, and decant; repeat the process with other portions of ether, as long as anything is taken up, and evaporate the residuum to a pilular consistence. *Robiquet.*

℞ Aqueous extract of opium, four parts.
Resin, one part.

Beat together, and add

Boiling water, sixteen parts.

Boil till reduced one-half, add as much cold water as has been boiled away, filter, and evaporate. *Limosin.—Lamothe.*

Extract of Opium.
(By Fermentation.)

℞ Opium, one part.
Water, eight parts.

Mix, and add

Yeast, sufficient.

Let ferment for a week, at a temperature of 68° to 70°; then dilute with water, filter, boil till all vinous odor is dissipated, and evaporate to proper consistence. *Deyeux.*

Extract of Opium. (Roasted.)

℞ Powdered opium, one part.

Heat it on a flat dish, over a moderate fire, constantly stirring, as long as fumes are given off. Treat it twice with six times its weight of cold water, filter, and evaporate. *Guibourt.*

The last three forms of extract, whilst containing the full proportion of morphia, are deprived of the irritating and virose principles of opium.

Deodorized Tincture of Opium.
(Elixir of Opium.)

℞ Opium, dried, and in powder, No. 50, two troyounces and a half.
Ether,
Alcohol, each, half a pint.
Water, sufficient.

Macerate the opium in half a pint of water for twenty-four hours, and express; macerate the dregs twice, successively, in eight fl. ounces of water; mix, and strain the liquors; evaporate to four fl. ounces, and agitate several times with the ether. Separate the ether, evaporate the liquid until the ether has been completely expelled; mix with twenty fl. ounces of water, filter, add sufficient water to make the filtrate measure a pint and a half, and add the alcohol. *U. S. Ph.*

About the same strength as laudanum. Dose, twenty-five drops.

Compound Powder of Opium and Chalk.

R. Powdered opium, six grains.
" cinnamon, one drachm.
" long pepper, eight grains.
Prepared chalk, one drachm and a half.

Mix, and divide into twelve powders. One, three or four times a day. In diarrhœa. *Ellis.*

Powder of Roasted Opium.

R. Powdered opium, at will.

Put it in a flat dish; moisten it with white wine, expose to a moderate heat, constantly stirring till it is perfectly dry; repeat the operation till the opium is one-half reduced, moisten with vinegar, and rub into paste; dry, and pulverize. As an astringent in hemorrhages and mucous discharges, in doses of one or two grains, with some bitter extract. *Giordano.*

Compound Powder of Opium.

R. Powdered opium, one ounce and a half.
" pepper, two ounces.
" ginger, five ounces.
" caraway, six ounces.
" tragacanth, half an ounce.

Mix thoroughly, and pass through a fine sieve. Dose, one to five grains. *Brit. Ph.*

Powder of Opium, Camphor, etc.

R. Powdered opium, ten grains.
" camphor, two scruples.
Carbonate of ammonium, four scruples.
Starch, fifteen grains.

Mix, and make eight powders. One, every hour or two, as an antispasmodic. *Swediaur.*

Powder of Opium and Nitre.

R. Powdered opium, four grains.
" nitre,
Sugar of milk, each, one drachm and a half.

Mix, and make six powders. As an antispasmodic. *Phœbus.*

Powder of Opium and Sulphur.

R. Powdered opium,
" camphor, each, two grains.
" sulphur,
" sugar, each, half a drachm.

Mix, and make four powders. One, every three hours, in lead colic. *Hildebrand.*

Powder of Opium and Musk.

R. Powdered opium, two grains.
Musk, five grains.
Magnesia, four grains.
Sugar of milk, ten grains.

Mix. To be taken every two to four hours, in delirium tremens. *Vogt.*

Powder of Opium and Antimony.

R. Dover's powder,
James's powder, each, four grains.

Mix. To be taken every four hours, in obstinate rheumatic pains. *Brera.*

Pills of Opium.

R. Powdered opium, twenty-four grains.
Soap, six grains.

Beat into a mass with water, and divide into twenty-four pills. *U. S. Ph.*

Pills of Opium, Henbane, and Hemlock.

R. Powdered opium, four grains.
Extract of henbane,
" hemlock,
each, fifteen grains.

Mix, and divide into ten pills. One at night, when an anodyne is required. *Ellis.*

Pills of Opium and Sulphuret of Antimony.

R. Extract of opium, ten grains.
Precip. sulphuret of antimony, twelve grains.

Nitrate of potassium, twenty-four grains.
Syrup, sufficient.

Mix, and make six pills. One at bedtime, to cause perspiration, and to ease pain in rheumatism. *Recamier.*

Pills of Opium and Foxglove.

℞. Powdered opium,
" foxglove, each, six grains.
Conserve of roses, sufficient.

Mix, and make twelve pills. One, every four hours, in asthma, etc. *Ellis.*

Aromatic Pills of Opium.

℞. Extract of opium,
Saffron,
Powdered cinnamon,
" nutmeg,
" cardamom, } each, one drachm.
Syrup of orange flowers, sufficient.

Mix, and make pills of three grains. Known as *Oriental Pills*, and considered to be aphrodisiac. One to three, at bedtime. *Cadet.*

Pills of Opium and Camphor.

℞. Extract of opium, three grains.
Camphor, six grains.
Syrup, sufficient.

Mix, and make six pills. One to three a day, as an anodyne and antispasmodic. *Foy.*

Pills of Opium and Butter of Cacao.

℞. Butter of cacao,
Powdered gum Arabic, each, forty-eight grains.
Extract of opium, twelve grains.
Syrup of ipecacuanha, sufficient.

Mix, and make pills of five grains. One in the evening, as an anodyne and expectorant. *Petit.*

Pills of Opium and Musk.

℞. Extract of opium, twelve grains.
" valerian,
Musk, each, twenty-four grains.

Mix, and make sixteen pills. One, then two, then three a day, in hysteria. *Foy.*

Pills of Opium and Sulphate of Zinc.

℞. Extract of opium, one grain.
Sulphate of zinc, four grains.
Syrup of gum, sufficient.

Mix, and make four pills. Two a day, in painful mucous discharges from the urethra or vagina. *Foy.*

Pills of Opium, Hemlock, and Calomel.

℞. Extract of opium, eighteen grains.
" hemlock, one drachm.
Calomel, thirty-six grains.
Syrup of mallow, sufficient.

Mix, and make thirty-six pills. Two to six a day, as an alterative and sedative, in organic affections. *Foy.*

℞. Opium, four grains.
Calomel, six grains.
Tartar emetic, one grain.
Extract of hemlock, one scruple.

Mix, and make eight pills; two to be taken at bedtime, in rheumatic pains. *Brande.*

Pills of Opium and Acetate of Lead.

℞. Acetate of lead, thirty-six grains.
Powdered opium, six grains.
Confection of roses, six grains.

Mix well. Dose, three to five grains. *Brit. Ph.*

℞. Extract of opium, one grain.
Acetate of lead, four grains.
Powdered henbane, eight grains.

Mix, and make eight pills. One, morning and evening, in epilepsy. *Recamier.*

℞. Acetate of lead, twenty-four grains.
Powdered opium, three grains.
Syrup, sufficient.

Mix, and make twelve pills. One every three hours, in hemorrhages, dysentery, and cholera. *Chapman.*

Pills of Opium and Acetate of Mercury.

℞. Extract of opium,
Acetate of mercury,
Camphor, each, twelve grains.
Syrup of poppies, sufficient.

Mix, and make thirty pills. One, morning and evening, in syphilis. *Carmichael.*

Pills of Opium, Nitrate of Silver, etc.

℞. Extract of opium, seventy-two grains.
Nitrate of silver, six grains.

Musk, forty-eight grains.
Camphor, ninety-six grains.

Mix, and make ninety-six pills. One, morning and evening, gradually increasing the dose, in epilepsy, paralysis, etc. *Foy.*

Pills of Opium, Castor, etc.

℞. Opium, half a grain.
Castor, six and a half grains.
Powdered digitalis, one grain.
Syrup, sufficient.

Make two pills. One to be taken twice or thrice a day. In spasmodic asthma and dyspnœa. *A. T. Thomson.*

Pills of Opium and Liquorice.

℞. Powdered opium, ten grains.
Extract of liquorice, one drachm.

Mix, and make eighty pills. One, occasionally, as an expectorant. *Wirt. Ph.*

Confection of Opium.

℞. Powdered opium, two hundred and seventy grains.
Aromatic powder, six troyounces.
Clarified honey, fourteen troyounces.

Rub the opium with the aromatic powder, add the honey, and beat together till thoroughly mixed. *U. S. Ph.*

℞. Compound powder of opium, one hundred and ninety-two grains.
Syrup, one fl. ounce.

Mix. *Brit. Ph.*

As a stimulant narcotic, in atonic gout, flatulent colic, etc. It contains one grain of opium in thirty-six grains of the mass.

℞. Powdered catechu, four ounces.
" kino, three ounces.
" nutmeg,
" cinnamon,
each, one ounce.
Opium, dissolved in wine, one drachm and a half.
Syrup of red roses, twenty-seven ounces.

Mix. Each drachm contains rather less than half a grain of opium. *Soubeiran.*

Anti-Odontalgic Mass.

℞. Opium, two grains.
White wax, two drachms.
Mastich, one drachm.
Oil of almonds, three drachms.
" cloves twelve drops.
Cochineal, eight grains.

Rub into a uniform mass. To fill carious teeth. *Clarus.*

℞. Opium, five grains.
Oil of cloves, three drops.
Extract of henbane, five grains.
" belladonna, ten grains.
Powdered pellitory, sufficient.

Mix, and make a consistent mass. Used as above. *Rust.*

Odontalgic Pills.

℞. Powdered opium, " belladonna root, Powdered pellitory, } each, five grammes (77 grs.).
Yellow wax, seven grammes (108 grains).
Expressed oil of almonds, two grammes (31 grains).
Oil of cloves,
" cajeput, each, fifteen drops.

Triturate in a warm mortar to form a pill mass, and divide into four hundred and eighty pills, each weighing five centigrammes (three-quarter grain); roll them in powdered cloves. *Ph. Germ.*

Balsam for the Toothache.

℞. Opium, one scruple.
Oil of turpentine, one drachm and a half.
Oil of cloves,
" cajeput, each, half a drachm.
Balsam of Peru, two drachms.

Mix. *Beasley.*

℞. Opium,
Camphor, each, two scruples.

Dissolve in a little alcohol, and add

Oil of cloves, one drachm.
" nutmeg, six drachms.
Guaiacum, two drachms.

Mix. *Van Mons.*

Odontalgic Drops.

℞. Wine of opium, Hoffmann's anodyne, Oil of peppermint, } equal parts.

Mix. In frictions on the cheek, and applied to carious teeth, on cotton. *Dobberan.*

Toothache Drops.

℞. Opium,
Camphor, each, ten grains.
Alcohol, sufficient.
Oil of cloves,
" cajeput, each, one drachm.
Mix. *Copland.*

Antidysenteric Opiate.

℞. Purified opium, four grains.
Ipecacuanha, half a drachm.
Tormentilla, one drachm.
Syrup of whortleberries,
Conserve of red roses,
each, six drachms.
Mix. Dose, one drachm, every hour.
Quarin.

Plaster of Opium.

℞. Extract of opium, one troyounce.
Burgundy pitch, three troyounces.
Lead plaster, twelve troyounces.
Water, three fl. ounces.
Mix extract with water, evaporate to a fl. ounce and a half, add to the pitch and plaster previously melted together, stir until moisture has evaporated, and cool.
U. S. Ph.

℞. Opium, in fine powder, one ounce.
Resin plaster, nine ounces.
Melt the plaster, gradually add the powder, and mix thoroughly. *Brit. Ph.*

℞. Elemi, eight parts.
Common turpentine, fifteen parts.
Yellow wax, five parts.
Melt by a moderate heat, strain, and add
Powdered olibanum, eight parts.
" benzoin, four parts.
" opium, two parts.
Balsam of Peru, one part.
Mix thoroughly. *Ph. Germ.*
As an application in rheumatic and other pains.

Plaster of Opium and Camphor.

℞. Powdered opium, } each, one
" camphor, } each, one
" soap, } drachm.
Laudanum, sufficient
to make a plaster. *Ellis.*

℞. Opium,
Camphor, each, half a drachm.
Lead plaster, sufficient.
Melt and mix. For local pains. *Paris.*

Plaster of Opium and Galbanum.

℞. Opium, one drachm.
Simple plaster, two ounces.
Galbanum, one ounce.
Oil of caraway, two drachms.
Melt the last three ingredients, and add the opium. As an application to the abdomen, in flatulent colic, diarrhœa, and dysentery. *Swediaur.*

Liniment of Opium.

℞. Tincture of opium,
Liniment of soap,
each, two fl. ounces.
Mix. *Brit. Ph.*
As an embrocation in rheumatic pains, sprains, etc.

Opiate Liniment.

℞. Olive oil, two fl. ounces.
Tincture of opium, two fl. drachms.
Solution of subacetate
of lead, half a fl. ounce.
Mix. *Ellis.*

℞. Ether, five fl. drachms.
Spirit of camphor, five fl. ounces.
Laudanum, one fl. ounce.
Mix. As an embrocation in flatulent colic.
Ainslie.

℞. Tincture of opium,
Simple ointment, each, one part.
Camphorated oil, eight parts.
Mix. As an embrocation in rheumatism, toothache, earache, etc. *Paris Codex.*

℞. Laudanum, } each, three
Hoffmann's anodyne, } each, three
Glycerin, } fl. drachms.
Extract of belladonna, twenty grains.
Mix. Apply upon flannel, and cover with oiled silk, in neuralgic affections. *Fuller.*

Liniment of Laudanum and Lime Water.

℞. Tincture of opium,
two fl. drachms and a half.
Lime water, one fl. ounce.
Oil of almonds, two fl. ounces.
Mix. To be applied on lint, four times a day, on painful syphilitic pustules.
Phœbus.

Liniment of Opium and Oil of Chamomile.

℞. Opium,
Oil of chamomile, each, half a drachm.
" almonds, two drachms.

Mix. As a friction around the eyes, in spasm of the eyelids. *Weller.*

Anti-Otitic Mixture.

℞. Opium, four grains.
Saffron, ten grains.
Myrrh, half a drachm.
Juice of mallow, half an ounce.
Oil of almonds, two ounces.

Triturate well together, and strain. As an injection into the ear, in pain in that organ. *Pierquin.*

Laudanum Ointment.

℞. Tincture of opium, one drachm.
Spermaceti ointment, two ounces.

Mix. As an application, morning and evening, to painful hemorrhoids. *Brera.*

Anodyne Ointment.

℞. Syrup of opium, one ounce.
Lard, three ounces.
Essence of roses, four drops.

Mix. For chapped lips. *Pierquin.*

℞. Extract of opium,
Water, each, one part.
Simple ointment, eighteen parts.

Mix thoroughly. *Ph. Germ.*

℞. Opium, half a drachm.
Extract of hemlock, one drachm.
Basilicon ointment, half an ounce.

Mix. As an application to gangrenous ulcers. *Carus.*

℞. Opium, ten grains.
Alum, fifteen grains.
Lard, half an ounce.

Mix. In the treatment of ulcerated, atonic buboes. *Simon.*

Ointment of Opium and Tar.

℞. Powdered opium, two drachms.
Tar ointment, one ounce.

Mix. As an application to hemorrhoids. *Ellis.*

Cerate of Opium.

℞. Extract of opium,
Distilled water, each, one part.

Dissolve and add

Galien's cerate, ninety-eight parts.

Mix well. *Paris Codex.*

℞. Opium, ten grains.
Yolk of egg, one.

Mix well, and add

Simple cerate, one ounce.

Triturate well together. *Lagneau.*

Syrup of Opium.

℞. Extract of opium, two parts.
Water, eight parts.
Syrup, nine hundred and ninety parts.

Dissolve the opium in the water, filter, and add to the syrup. *Paris Codex.*

The syrup of *Ph. Germ.* is of just one-half this strength.

Succinated Syrup of Opium.

℞. Syrup of opium, one ounce.
Spirit of amber, two grains.

Mix. *Soubeiran.*

Anodyne Collyrium.

℞. Extract of opium, ten grains.
Camphor, six grains.
Boiling water, twelve fl. ounces.

Rub the opium and camphor together, and add the water, and strain. *Ellis.*

℞. Extract of opium, four grains.
Rose water, four troyounces.

Dissolve, and strain. *Paris Codex.*

Collyrium of Wine of Opium.

℞. Decoction of flaxseed, four ounces.
Saffron, one drachm.
Wine of opium, one drachm.

Macerate the saffron in the flaxseed decoction, strain, and add the wine of opium. *Foy.*

℞. Acetate of copper, three grains.

Dissolve in

Rose water, eight fl. ounces,

and add

Wine of opium, one fl. drachm.

In chronic ophthalmia. *Foy.*

Opium Fomentation.

℞. Extract of opium, two drachms.
Boiling water, one pint.

Dissolve, and strain. As a fomentation in pruriginous affections. *Radius.*

Fomentation of Wine of Opium.

℞. Opium, one ounce.
Wine, two pints.

Boil down to one pint. As an anodyne application, in gouty and rheumatic pains, etc. *Pierquin.*

Injection of Opium.

℞. Opium, twelve grains.
Solution of subacetate of lead, twelve drops.
Water, nine ounces.

Mix. As an injection in gonorrhœa. *Girtenner.*

℞. Extract of opium, six grains.
" belladonna, one drachm and a half.
Decoction of wild lettuce, one pound.

Dissolve. As an injection in neuralgia, and hemorrhage of the urethra and vagina. *Foy.*

℞. Extract of opium, one and a half grains.
Distilled water, five fl. drachms.

Dissolve. As an injection in coryza, and other inflammations of the nasal mucous membrane. *Deschamps.*

He directs one nostril to be closed by the finger, and the liquid to be drawn up into the other, etc.

Clyster of Opium.

℞. Tincture of opium, half a fl. drachm.
Mucilage of starch, two fl. ounces.

Mix. *Brit. Ph.*

℞. Powdered opium, two grains.
Mucilage of gum Arabic, half a fl. ounce.
Tepid milk, two fl. ounces.

Mix. *Ellis.*

℞. Flaxseed, one ounce.
Boiling water, six ounces.

Infuse for an hour, strain, and add

Extract of opium, two grains.

Dissolve. *Spielmann.*

Clyster of Laudanum and Valerian.

℞. Tincture of opium, five to six drops.
Infusion of valerian, three ounces.

Mix. In spasms, in children. *Swediaur.*

Suppositories of Opium.

℞. Extract of opium, twelve grains.
Oil of theobroma, three hundred and forty-eight grains.

Rub the extract of opium with a little water into a smooth paste, then mix intimately with sixty grains of cacao butter, incorporate with the remainder, and make twelve suppositories. *U. S. Ph.*

Suppositories of Lead and Opium.

℞. Acetate of lead, in very fine powder, thirty-six grains.
Extract of opium, six grains.
Oil of theobroma, three hundred and twenty grains.
Water, sufficient.

Proceed as above, for making twelve suppositories. *U. S. Ph.*

The compound lead suppositories, *Brit. Ph.*, contain three grains acetate of lead and one grain of powdered opium each.

Linctus with Opium.

℞. Extract of opium, one grain.
" Peruvian bark, four grains.
Camphor, six grains.
Sugar, one drachm.
White linctus, four ounces.

Mix. In bronchitis when the cough is violent. *Foy.*

Mixture of Opium and Lime Water.

℞. Extract of opium, one grain.
Lime water,
Oil of almonds, each, three fl. drachms.

Mix. For the treatment of sore nipples, to be applied on dossils of lint. *Sibergundi.*

Water of Opium.

℞. Opium, in small pieces, one part.
Water, ten parts.

Macerate, and distil five parts. It is given to children in the dose of one drachm in syrup. *Ph. Germ.*

Muriate of Opium.

℞. Powdered opium, one ounce.
Muriatic acid, one ounce.
Distilled water, twenty ounces.

Mix, and shake the mixture, frequently, for fourteen days, strain, and filter. Dose, from twenty to forty drops. Said not to cause headache. *Nichol.*

Vinegar of Opium. Black Drop.

℞. Opium, dried, in powder, No. 40, five troyounces.
Nutmeg, in powder, No. 40, one troyounce.
Sugar, eight troyounces.
Diluted acetic acid, sufficient.

Macerate powders in a pint of the acid for twenty-four hours, put into a glass percolator, return the liquid until it passes through clear, displace altogether twenty-six fl. ounces, in this dissolve the sugar, strain, and add sufficient diluted acetic acid to make two pints. *U. S. Ph.*

Dose, about six minims or ten drops, which are nearly equivalent to one grain of opium.

℞. Opium, two ounces.
Nutmegs, grated, three drachms.
Saffron, one drachm.
Distilled vinegar, one pound.

Boil together for a quarter of an hour, then add an ounce of sugar, and half an ounce of yeast; let this mixture ferment for six weeks, strain, and evaporate to four fl. ounces. (Sp. gr. 1.2.) One ounce is equivalent to half an ounce of opium. Dose. one or two drops. *Codex, Hamb.* 1845.

Lancaster Black Drop.

℞. Opium, half a pound.
Verjuice, three pints.
Bruised nutmeg, one ounce and a half.
Saffron, half an ounce.

Boil to a proper consistence; add two ounces of yeast, and let stand in a warm place for six or eight weeks, and then in the open air till of the consistence of syrup, then decant, filter, and bottle; adding a little sugar to each bottle. Dose, six to ten drops. *Armstrong.*

Houlton's Black Drop.

℞. Opium, two ounces and a half.
Diluted acetic acid, thirty-two ounces.

Digest for six days with a gentle heat, filter, and evaporate to an extract; macerate in

Rectified spirit, five fl. ounces,
Distilled water, thirty-five ounces,

for eight days, and filter. *Beasley.*

About the strength of laudanum.

Guy's Hospital Black Drop.

℞. Powdered opium, eight ounces.
Juice of crab apples, two pints.

Boil gently for half an hour, decant, and boil residue with one pint more of the juice, for a quarter of an hour; express and strain; mix the two liquors, and add

Bruised nutmeg, one ounce.
Saffron, half an ounce.
Yeast, half a fl. ounce.

Ferment for some days; macerate for fourteen days; filter, and evaporate by a water-bath to the consistence of thin syrup. Dose, two to ten minims. *Beasley.*

Rousseau's Black Drop.

℞. Opium, four ounces.
Honey, twelve ounces.
Hot water, five pounds.
Yeast, two drachms.

Dissolve the opium and honey separately in the hot water, mix, and add the yeast; keep at about 86° F. for a month; express; filter, distil off sixteen ounces, and evaporate residue to ten ounces; add to it four and a half ounces of strong spirit; mix, and filter. Seven drops are equivalent to one grain of opium. *Beasley.*

Porter's Black Drop.

℞. Opium, four ounces.
Citric acid, two ounces.

Beat together in a mortar, and add

Boiling distilled water, one pint.

Triturate well together, let stand for twenty-four hours, and filter. Dose, from six to twenty-four drops. *Redwood.*

Acetated Tincture of Opium.

℞. Powdered opium, two troyounces.
Distilled vinegar, twelve fl. ounces.
Alcohol, half a pint.

Rub the opium with the vinegar, then add the alcohol, macerate for seven days, express, and filter through paper.

Dose, ten minims or twenty drops, which are equivalent to a grain of opium. *U. S. Ph.*

Mixture with Black Drop.

℞. Houlton's black drop, ten drops.
Spirit of nitrous ether, half a drachm.
Distilled water, one ounce.
Mix. To be taken at once. *Foy.*

Sedative Mixture.

℞. Opium, two grains.
Distilled vinegar, half an ounce.
Plantain water, six ounces.
Syrup of white poppy, one ounce.
Mix, and filter. In spoonful doses, in hæmoptysis with spasms. *Pierquin.*

Wine of Opium.

℞. Opium, in powder, No. 50, two troyounces.
Cinnamon, in powder, No. 50,
Cloves, in powder, No. 50, each, sixty grains.
Sherry wine, sufficient.
Macerate powders with fifteen fl. ounces of wine for seven days, transfer to a conical percolator, and, with sherry wine, displace one pint. *U. S. Ph.*

Eight minims are equivalent to one grain of opium.

℞. Extract of opium, one ounce.
Cinnamon, bruised,
Cloves, bruised, each, seventy-five grains.
Sherry wine, twenty fl. ounces.
Macerate for seven days, and filter. *Brit. Ph.*

Twenty minims contain one grain of extract of opium.

℞. Extract of opium, two ounces.
Cinnamon water, ten ounces.
Alcohol, two ounces.
White wine, four ounces.
Mix, and macerate for four days, and filter. *Brugnatelli.*

About twice the strength of the preceding. Dose, ten to fifteen drops.

Laudanum of Sydenham.

℞. Opium, two ounces.
Saffron, one ounce.
Bruised cinnamon,
" cloves, each, one drachm.
Sherry wine, one pint.
Infuse them together in a bath-heat for two or three days, till the tincture becomes of a due consistence, and after straining it off, set it by for use. Dose, sixteen or eighteen drops. *Rush's Sydenham*, p. 155.

Tincture of Opium and Saffron.

℞. Powdered opium, sixteen parts.
Saffron, six parts.
Powdered cloves,
" cinnamon,
each, one part.
Sherry wine, one hundred and fifty-two parts.
Digest for a week, express, and filter. Ten grains represent one grain of opium. *Ph. Germ.*

Mixture of Opium and Cinnamon Water.

℞. Powdered opium, ten grains.
Sugar, one drachm.
Cinnamon water, six fl. ounces.
Mix. A tablespoonful every two hours, in tetanus and colica pictonum. *Ellis.*

Mixture of Opium and Syrup of Poppies.

℞. Opium, two to three grains.
Syrup of poppies, one ounce.
Chamomile water, six ounces.
Mix. A spoonful every half hour, in dysentery. *Swediaur.*

Mixture of Wine of Opium.

℞. Wine of opium, ten drops.
Cinnamon water, one ounce.
Balm water, two ounces.
Tincture of castor, twenty drops.
Syrup of opium, half an ounce.
Mix. In spoonful doses, in uterine colic. *Augustin.*

℞. Cascarilla,
Columbo, each, two drachms.
Boiling water, sufficient
to obtain seven ounces of strained infusion. Add to this
Wine of opium,
Ether, each, twenty drops.
To be taken by degrees, in chronic diarrhœa. *Brera.*

Tincture of Opium. Laudanum.

℞. Opium, dried, in powder, No. 50, two troyounces and a half.
Water,
Alcohol, each, half a pint.

Macerate opium in the water for three days, add the alcohol, and again macerate for three days; introduce into a percolator, and, with diluted alcohol, displace two pints. *U. S. Ph.*

Dose, thirteen minims, or twenty-five drops, equivalent to a grain of opium. The tincture of *Brit. Ph.* is of about the same strength.

℞ Powdered opium, four parts.
Alcohol, sp. gr. .892,
Distilled water,
each, nineteen parts.

Digest for a week, express, and filter. Ten grains are equivalent to one grain of opium. *Ph. Germ.*

Tincture of Extract of Opium.

℞ Extract of opium, one part.
Alcohol, of 60 pr. ct., twelve parts.

Dissolve, and filter. *Paris Codex.*

Battley's Sedative Drops.

℞ Hard extract of opium, three ounces.
Boiling distilled water, thirty ounces.

Dissolve, filter when cold, and add

Rectified spirit, six ounces,

and water sufficient to make up two pints. *Cooley.*

Dose, twenty drops.

Smith's Concentrated Laudanum.

℞ Denarcotized opium, four ounces.

Dissolve in alcohol, filter, evaporate to consistence of an extract, redissolve in water, and evaporate the filtered solution to twelve ounces; add

Rectified spirit, twenty-two drachms.
Distilled water, sufficient

to make up sixteen ounces. Dose, three to five drops. *Beasley.*

Compound Tincture of Opium.

℞ Extract of liquorice,
Opium, each, half an ounce.
Carbonate of potassium, one drachm.
Water, three pints.

Boil down to one pint, filter, and evaporate to twelve ounces; then add

Spirit of pimento, five fl. ounces.
Powdered cochineal, half a drachm.

Let rest for some time, and filter. *Med.-Chirurg. Rev.*

Compound Tincture of Opium and Capsicum.
(Diarrhœa Mixture.)

℞ Tincture of opium, } each, one
" capsicum, } fl. ounce.
Spirit of camphor, }
Pure chloroform, three fl. drachms.
Alcohol, sufficient for five fl. ounces.

Mix. Dose, a fluidrachm, in water. *Squibb.*

Ammoniated Tincture of Opium.

℞ Opium, in coarse powder, one hundred grains.
Saffron, cut small,
Benzoic acid, each, one hundred and eighty grains.
Oil of anise, one fl. drachm.
Strong water of ammonia, four fl. ounces.
Rectified spirit, sixteen fl. ounces.

Macerate for seven days, express, filter, and add spirit to make twenty fl. ounces. *Brit. Ph.*

Also called *Scotch paregoric.* Eighty minims should contain one grain of opium.

Camphorated Tincture of Opium. Paregoric.

℞ Powdered opium,
Benzoic acid, each, one drachm.
Oil of anise, one fl. drachm.
Clarified honey, two ounces.
Camphor, two scruples.
Diluted alcohol, two pints.

Macerate for fourteen days, and filter. *U. S. Ph.*

Half a fl. ounce contains rather less than a grain of opium. Dose, for an infant, five to twenty drops; for an adult, one to two fl. drachms.

This is the *compound tincture of camphor* of *Brit. Ph.*, and the *benzoated tincture of opium* of *Ph. Germ.*

Bateman's Pectoral Drops.

℞ Diluted alcohol, four gallons.
Rasped red saunders, two ounces.

Digest for twenty-four hours, filter, and add

Powdered opium, } each,
" catechu, } two ounces.
Camphor, }
Oil of anise, four fl. drachms.

Digest for ten days. About as strong as camphorated tincture of opium, or two grains of opium to the fl. ounce.
Phil. Coll. Ph.

Godfrey's Cordial.

℞. Tincture of opium, one pint and a half.
Sugar-house molasses, sixteen pints.
Alcohol, two pints.
Water, twenty-six pints.
Carbonate of potassium, two ounces and a half.
Oil of sassafras, four fl. drachms.

Dissolve the carbonate of potassium in the water; add the molasses; heat over a gentle fire, till they simmer; remove the scum; add the laudanum and oil of sassafras, previously mixed together. *Phil. Coll. Ph.*

Contains rather more than one grain of opium to the fl. ounce.

Compound Pills of Soap.

℞. Powdered opium, sixty grains.
Powdered soap, half a troyounce.

Beat with water into a pilular mass. Dose, three to five grains.
U. S. Ph. and *Brit. Ph.*

Tincture of Opium and Soap.

℞. Opium, half an ounce.
Soap, two ounces.
Alcohol, sixteen ounces.

Digest for three days on a water-bath, filter, and dissolve in the liquor,

Camphor, six drachms.
Oil of rosemary, one drachm.

Principally used in frictions, in pains in the limbs, etc., but also given internally, in doses of thirty to fifty drops, in wine.
Turin Ph.

Succinated Tincture of Opium.

℞. Opium, forty grains.
Camphor,
Amber, each, half a drachm.
Alcohol, six ounces.

Digest for four days on a water-bath, and filter. As a friction in spasmodic attacks.
Dumas.

Swediaur's Tincture of Opium.

℞. Extract of opium, one drachm.
Distilled water, four drachms.
Alcohol, half a drachm.

Dissolve, and filter. Five drops are equivalent to a grain of opium. *Swediaur.*

Warner's Tincture of Opium.

℞. Opium,
Soap, each, six drachms.
Nutmeg, one drachm.
Camphor, four drachms.
Saffron, forty grains.
Spirit of ammonia, nine ounces.

Digest for ten days, agitating occasionally, then filter. *Van Mons.*

Lettsom's Elixir.

℞. Opium, }
Benzoic acid, } each, two drachms.
Saffron, }
Camphor, four scruples.
Oil of anise, one drachm.
Ipecacuanha,
Balsam of tolu,
each, half an ounce.
Alcohol, two pounds.

Macerate for ten days, and filter. Dose, five to twenty drops, in hooping-cough.
Augustin.

Opiate Linctus.

℞. Tincture of opium, two fl. drachms.
Diluted sulphuric acid, two fl. drachms and a half.
Molasses, eight fl. ounces.
Water, three fl. ounces.

Mix. A teaspoonful occasionally, to quiet cough. *Beasley.*

Anodyne Draught.

℞. Camphor water, nine drachms.
Nitrate of potassium, six grains.
Comp. spirit of ether, one drachm.
Tincture of opium, ten to twelve minims.
Syrup of poppies, two drachms.

Mix. To be taken at bedtime. *Copland.*

℞. Tincture of opium, twelve minims.
Water, one fl. ounce.

Pimento water, three drachms.
Syrup of poppies, one drachm.
Mix. *Beasley.*

℞ Tincture of opium,
fifteen to twenty-five drops.
Syrup of poppies,
two fl. drachms.
Spirit of cinnamon,
one fl. drachm.
Distilled water,
one fl. ounce and a half.
Mix. *Ellis.*

Mixture of Laudanum and Tartar Emetic.

℞ Laudanum, one fl. drachm.
Tartar emetic, four grains.
Camphor water, eight fl. ounces.
Mix. In delirium tremens, and the advanced stages of low fevers. Dose, half a fl. ounce to one fl. ounce. *Graves.*

Opium Lozenges.

℞ Extract of opium,
seventy-two grains.
Tincture of tolu, half a fl. ounce.
Sugar, sixteen ounces.
Gum Arabic, two ounces.
Extract of liquorice, six ounces.
Distilled water, sufficient.
Mix thoroughly, and make 720 lozenges. Dose, one to six. *Brit. Ph.*

Eclectic Dover's Powder.

℞ Powdered opium, half a drachm.
" camphor, two drachms.
" ipecacuanha,
one drachm.
Cream of tartar, one ounce.
Mix thoroughly. Dose, ten grains.
Am. Journ. Ph. 1854.

OPOPONAX.

Opoponax.

A gum resin obtained from the *Opoponax chironium*, a tall, parsnip-like plant, a native of the warm countries of Europe and the Levant.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

De Candolle, iv. 170. Griffith, Med. Bot. 323.

It occurs in tears and irregular lumps, or fragments, of a reddish-yellow color. Its odor is strong, peculiar, and unpleasant, and its taste bitter and acrid. It is seldom used in this country, but was formerly much esteemed in a variety of diseases. The dose is from ten to thirty grains.

Tincture of Opoponax.

℞ Opoponax, one part.
Alcohol, five parts.
Macerate for some days, and filter. *Béral.*

Compound Tincture of Opoponax.

℞ Round birthwort, } each,
Long birthwort, } each,
Orris root, } half an ounce.
Opoponax, }
Sagapenum, each, two drachms.
Guaiacum, four scruples.
Cloves, two drachms.
Camphor, three drachms.
Alcohol, ten ounces.
Macerate for twenty-four hours, and filter. As an application to foul venereal ulcers. *Brera.*

Emulsion of Opoponax.

℞ Opoponax,
Soap, each, one drachm.
Yolk of egg, two drachms.
Syrup of wormwood,
one ounce and a half.
Fennel water, three fl. ounces.
Make an emulsion. A teaspoonful every hour as a vermifuge. *Bories.*

ORIGANUM.

Marjoram.

The article so designated in the *U. S. Ph.* is the herb of the *Origanum vulgare*, a native of Europe, but extensively naturalized in the United States. By several European pharmacopœias, the sweet marjoram is likewise recognized; this is the herb of *O. majorana.*

Sex. Syst. Didynam. gymnos. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 834. Griffith, Med. Bot. 511.

The dried herb has an aromatic, agreeable odor, and a hot, pungent taste, depending on the presence of a volatile oil. It is somewhat tonic and stimulating, and has been used in the form of infusion as a diaphoretic and emmenagogue. The oil is employed in stimulating liniments.

Oil of Origanum.

℞ Marjoram, at will.
Water, sufficient.

Mix, distil, and separate the oil in the receiver.

Much of the imported oil is obtained from another plant (*Thymus vulgaris*), which is fraudulently substituted for the genuine. Dose, one to three drops. This enters into the composition of the opodeldoc, as formerly officinal in the *U. S. Ph.*

Oleo-infusion of Sweet Marjoram.

℞. Fresh sweet marjoram, one part.
Olive oil, two parts.

Bruise the herb and digest in the oil, until the water has evaporated; express and filter. *Paris Codex.*

ORYZA

Rice.

The seed or grain of *Oryza sativa*, an annual plant, said to be a native of Ethiopia, but now extensively cultivated in most warm countries.

Sex. Syst. Hexand. digyn. *Nat. Syst.* Graminaceæ.

Linn. Sp. Pl. 475. Griffith, Med. Bot. 660.

This grain as found in commerce is deprived of its cuticle, is white, dry, hard, inodorous, and of a farinaceous taste. It is very nutritive, and, in the form of a decoction, emollient.

Rice Water.

℞. Rice, well washed, two ounces.
Water, two quarts.

Boil for an hour and a half, then add sugar and flavoring, as may be required. *Ellis.*

℞. Rice, five drachms.
Water, sufficient

to obtain a quart of decoction; add

Liquorice root, three drachms.

Let stand for some time, and strain, adding sugar, etc., at will. *Cottereau.*

Rice Gruel.

℞. Ground rice, one ounce.
Cinnamon, one drachm.
Water, one quart.

Boil for forty minutes, adding the aromatic near the close. Strain, and sweeten. *Ellis.*

Mucilage of Rice.

℞. Rice, one ounce.

Macerate it for three hours in

Tepid water, one quart.

Then boil slowly for an hour, and strain. *A. T. Thomson.*

Rice Jelly.

℞. Rice, sufficient.

Macerate in as much water as will cover it, boil slowly, adding water as it evaporates, until the rice is reduced to a pap; sweeten and flavor, and pass through a fine sieve. On cooling, it becomes a moderately-consistent jelly. A good diet in dyspepsia, etc.

OVUM.

Egg.

Oil of Eggs.

℞. Yolk of eggs, at will.

Heat gently till the moisture is dissipated, introduce into a displacer, and exhaust by ether, distil the product in a water-bath, heat the residue, till the albuminous matter coagulates, then strain. *Old Paris Codex.*

Was, at one time, much esteemed as an application to hemorrhoids, chaps, excoriations, etc., but it is now seldom employed.

Emulsion of Eggs.

℞. Yolks of eggs, two.
Powdered sugar, one ounce.
Boiling water, fourteen ounces.

Triturate the eggs and sugar in a marble mortar, gradually adding the water. *Béral.*

Emollient Clyster of Eggs.

℞. Yolk of eggs, two.
Decoction of bran, one pound.

Mix. *Pierquin.*

Restorative Clyster of Eggs.

℞. Yolk of egg, one.
White wine, two fl. ounces.
Beef tea, without salt, eight fl. ounces.

Mix. *Radius.*

Mixture with Eggs.

℞. Yolk of egg, one.
Cream, six fl. ounces.
Cinnamon barley-water, six fl. drachms.
Sugar, one ounce.

Mix. To be taken in teaspoonful doses, in the convalescence of children. *Foy.*

℞. Yolk of egg, one.
Water, two pints.

Make an emulsion, and add

Common salt,	half a drachm.

Mix. In mesenteric atrophy of children. *Hufeland.*

Egg and Brandy Mixture.

R. Brandy, Cinnamon water, each,	four fl. ounces.
Yolks of eggs,	two.
Sugar,	half an ounce.

Mix well. *Brit. Ph.*

As a stimulant in the sinking stage of fevers.

Egg and Wine Mixture.

R. Yolks of eggs,	two.
Oil of cinnamon,	twenty drops.

Mix, and add

Madeira wine, Cinnamon water, each,	three fl. ounces.
Distilled water,	two fl. ounces.
Sugar,	two drachms.

Mix. Three or four tablespoonfuls for a dose. In convalescence from low fevers. *Ellis.*

Glyconin.

R. Yolk of egg,	four parts.
Glycerin,	five parts.

Mix well. As an application to sore nipples, excoriations, etc. *Sichel.*

Liniment of Eggs.

R. Yolk of egg,	one.
Flaxseed oil,	two ounces.

Mix well. As an application to burns. *Radius.*

R. White of egg,	one.
Flaxseed oil,	three ounces.

Mix well. As the last. *Mynsicht.*

Cerate of Eggs.

R. Yolk of egg,	one part.
Simple cerate,	two parts.

Mix well. *Foy.*

R. Yolk of a hard-boiled egg,	one.
Yellow wax,	half an ounce.
Almond oil,	one ounce and a half.

Melt the wax and oil together, and add the egg, triturating them thoroughly together. As an application to burns. *Soubeiran.*

P.

PANAX.

Ginseng.

This is the root of *P. quinquefolium*, an herbaceous plant, indigenous to rich woodlands of this country.

Sex. Syst. Pentand. digynia. *Nat. Syst.* Araliaceæ.

The root is three to five inches long, spindle-shaped, usually forked, yellowish-gray externally, white internally, of a faint aromatic odor, and a sweetish mucilaginous taste. The root of *P. Shinseng*, a native of China, has the same properties, and is highly valued there for its supposed medicinal qualities. Both kinds are somewhat demulcent, and perhaps slightly stimulant.

PANCREATINUM.

Pancreatin.

It is obtained from the pancreas of recently-killed animals, by treating the colorless viscous juice with alcohol and drying the precipitate in vacuo. It is employed with the view of stimulating the digestion of fatty compounds, and is usually administered in the form of emulsion, or dissolved in very weak alcohol, or as powder.

Digestive Solution of Pancreatin.

R. Pancreatin, Carbonate of potassium, each,	ten grains.
Balm water,	twenty drachms.
Syrup of orange-peel,	five drachms.

Dissolve and mix. Dose, one or two tablespoonfuls at mealtime. *Vanden Corput.*

Powder of Pancreatin.

R. Pancreatin, Bicarbonate of sodium, each,	one part.
Vanilla sugar,	ten parts.

Mix. *Vanden Corput.*

Nutritive Injection.

℞. Bullock's pancreas, one.
Glycerin, eight troyounces.

Rub the finely-minced pancreas with the glycerin; mix one-third of this mixture with four to five ounces of finely-minced meat, and inject into the rectum. Said to be readily digested. *Merkel.*

Glycerite of Pancreatin.

℞. Fresh pancreas, finely minced,
Glycerin, each, one pound.

Digest at 120° for twenty-four hours, drain, wash the residue twice with four ounces of water; filter the washings, evaporate to one-half, and mix with first portion.
Merkel.

This makes a perfect and agreeable emulsion with fats. Cod-liver oil mixed with it in the proportion of one part to ten, becomes palatable and easy of digestion.

PAPAVER.

Poppy Heads.

The ripe capsules of *Papaver somniferum*. These capsules are of a more or less globular form, crowned by a radiated, persistent stigma; of a light-brown color, a papery and brittle texture, inodorous, but of a slightly bitter taste. They are analogous in properties, but in an inferior degree, to opium. They contain numerous small white or blackish seeds, which are not used medicinally, with the capsules. These seeds contain a considerable quantity of a bland fixed oil.

Decoction of Poppy Heads.

℞. Poppy heads, bruised, two ounces.
Water, thirty ounces.

Boil for a quarter of an hour and strain; it measures twenty fl. ounces. *Brit. Ph.*

As a soothing and anodyne fomentation, in painful tumors and inflammations.

Syrup of Poppies.

℞. Poppy capsules, bruised, and deprived of seeds, thirty-six oz.
Sugar, four pounds.
Boiling water, sufficient.
Rectified spirit, sixteen fl. ounces.

Infuse the capsules in four pints of the water for twenty-four hours; then exhaust by displacement, evaporate to three pints (imper. meas.), cool, add the spirit, and, after twelve hours, filter; evaporate to two pints (imper.), and dissolve the sugar. The product weighs six pounds and a half, and has the specific gravity 1.320. *Brit. Ph.*

Dose, one fl. drachm, as a sedative and hypnotic.

℞. Poppy heads, sixteen troyounces.
Diluted alcohol, four pints.
Sugar, thirty ounces.

Deprive the heads of their seeds; bruise them thoroughly, macerate them in twice their weight of diluted alcohol for two days, express powerfully, add the remainder of the alcohol, and after twenty-four hours, again express. Evaporate the liquids to one pint, strain, and add the sugar, and dissolve by the aid of a gentle heat.
W. Procter.

℞. Poppy heads, cut,
St. John's bread, cut,
each, three parts.
Liquorice root, cut, two parts.
Boiling water, fifty parts.

Digest for two hours, express, evaporate to fifteen parts, filter, and add

Sugar, twenty-five parts.

Dissolve. Dose, a tablespoonful.
Ph. Germ.

Substitute for Syrup of Poppies.

℞. Extract of opium, ten grains.
Water, ninety grains.
Syrup, thirty-three drachms.

Dissolve and mix. *Paris Codex.*

This and the preceding preparations are known as *Diacodion Syrup.*

℞. Sulphate of morphia, four grains.
Water, one fl. ounce.

Dissolve, and mix with

Syrup, fifteen fl. ounces.

Each fl. ounce contains one-quarter of a grain of the sulphate of morphia. *Wood.*

Extract of Poppy Heads.

℞. Poppy heads,
bruised, sixteen ounces.
Alcohol, two ounces.
Boiling water, sufficient.

Exhaust with the water, evaporate to a pint, cool, add the alcohol, filter after twenty-four hours, and evaporate to the proper consistence. Dose, two to five grains.
Brit. Ph.

Pectoral Syrup.

℞. Dates, two pounds.
Jujube, one pound.

Liquorice root, half a pound.
Mallow root, }
Maidenhair, } each, four ounces.
Poppy heads, }
Water, sixteen pints.

Boil, strain, and add

Sugar, eight pounds.

Evaporate to the consistence of syrup. Dose, one to two ounces. *Gassicourt.*

Sedative Injection.

℞. Simple emulsion, five fl. ounces.
Decoction of poppy heads, one pint.
White of egg, one drachm.

Mix. As an injection in acute gonorrhœa. *Gassicourt.*

Sedative Mixture.

℞. Flaxseed, two drachms.
Poppy head, one.
Water, sufficient

to obtain eight ounces of infusion; add

Yolk of egg, one.

Mix well. In painful diarrhœa. *St. Marie.*

PAREIRA.

Pareira Brava.

Both the *U. S.* and *Brit. Ph.* refer this root to *Cissampelos pareira*, a climbing shrub, with large, cordate, villous leaves, a native of the West Indies and South America. But according to Mr. Daniel Hanbury, the root and stem of this plant do not agree either with the older descriptions, or with the article met with in the shops. The latter is the stem of an unknown plant, while the true pareira brava is the root of *Chondodendron tomentosum* or *Cocculus chondodendron*, a native of Brazil. *Sex. Syst.* Diœc. monand. *Nat. Syst.* Menispermaceæ.

De Cand. Prodr. I. 98. See also Griffith, Med. Bot. 106, and Amer. Journ. Phar. 1873, October.

The root, which is the officinal portion, is usually in large crooked pieces, of a dark blackish-brown color externally, and light yellowish-brown within; it has at first a sweetish, and somewhat aromatic taste, but leaves a bitterish, unpleasant impression; the odor is very slight. It is tonic and alterative, and acts specifically on the bladder, allaying irritability and diminishing mucous secretion. The dose, in substance, is from thirty grains to a drachm.

Infusion of Pareira Brava.

℞. Pareira brava, bruised, one troyounce.
Boiling water, one pint.

Macerate for two hours, and strain. *U. S. Ph.*

Dose, one to two fl. ounces, in irritation and chronic inflammation of urinary passages.

Decoction of Pareira Brava.

℞. Pareira brava, sliced, one ounce and a half.
Distilled water, twenty ounces.

Boil for fifteen minutes, express, strain, and obtain twenty fl. ounces. Dose, one to two fl. ounces. *Brit. Ph.*

Extract of Pareira Brava.

℞. Pareira brava, in coarse powder, one pound.
Water, sufficient.

Digest the powder with a pint of the water for twenty-four hours, introduce into a percolator, and with water displace slowly one gallon, evaporate this to a pilular consistence. Dose, ten to twenty grains. *Brit. Ph.*

Fluid Extract of Pareira Brava.

℞. Pareira brava, in powder, No. 60, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Mix the liquids, moisten the powder with four fl. ounces of the mixture, pack in a percolator, add remaining liquid, and macerate for four days; then, with diluted alcohol, displace twenty-four fl. ounces, reserving the first fourteen, add to remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion.

Brit. Ph. exhausts with boiling water; sixteen fl. ounces of the liquid extract are preserved by three fl. ounces of rectified spirit.

Dose, half to one fl. drachm.

Tincture of Pareira Brava.

℞. Pareira brava, two ounces.
Diluted alcohol, one pint.

Digest for seven days, and filter. *Brodie.*

Dose, fifty to sixty drops.

PAULLINIA.

Paullinia (Guarana)

Is a preparation from the seeds of *Paullinia sorbilis*, a climbing plant, indigenous to Brazil. The seeds are dried, pounded, mixed with cacao and cassava, and with water formed into a paste, which is dried. This preparation is of a brown color, hard, light, inodorous, and of a somewhat astringent taste. It contains a considerable proportion of coffeina, and is highly esteemed in Brazil, in diseases of the bowels and bladder, and has been used in Europe as a tonic in these, and in chlorosis, etc., with much success.

Sex. Syst. Octand. trigyn. *Nat. Syst.* Sapindaceæ.

Martius, Mat. Med. Bras. 59.

Lozenges of Paullinia.

℞ Alcoholic extract of paullinia, twenty-one grains.
Vanilla sugar, five hundred grains.
Mucilage of tragacanth, sufficient.

Mix, and form lozenges of ten grains each. Dose, sixteen to twenty during the day.
Gavrelle.

Syrup of Paullinia.

℞ Alcoholic extract of paullinia, one part.
Simple syrup, one hundred parts.

Dissolve. Dose, half a fl. ounce. *Dorvault.*

Pills of Paullinia.

℞ Paullinia, sufficient.

Make into pills of a grain and a half. Five to ten, as occasion may require.
Gavrelle.

Alcoholic Extract of Paullinia.

℞ Powdered paullinia, at will.
Alcohol, sufficient.

Introduce into a displacement apparatus, and pass the alcohol through till the powder is exhausted; distil off the spirit, and evaporate to proper consistence. Eight to ten grains during the day. *Dechastelus.*

Chocolate with Paullinia.

℞ Paullinia, one ounce.
Chocolate, sixteen ounces.

Mix, and form a paste. As a restorative, in diseases of debility, chlorosis, etc.
Beasley.

PEPO.

Pumpkin Seed.

They are obtained from *Cucurbita pepo*, an herbaceous plant, extensively cultivated for the sake of its fruit.

Sex. Syst. Monœc. Monadel. *Nat. Syst.* Cucurbitaceæ.

The seeds are white, flat, ovate, and marked with a groove near the margin; they have no odor, but a mucilaginous and oily taste, and are employed as a tænifuge.

Dose, half to one ounce in the form of emulsion.

PEPSINUM.

Pepsin.

Of well-cleaned fresh hogs' stomachs, the mucous membrane is dissected off, chopped finely, and macerated for several days in water acidulated with muriatic acid; the strained and decanted clear liquid is mixed with a saturated solution of table salt in water, and the separated pepsin after several hours drained on a muslin strainer, and submitted to strong pressure. It may be further purified by redissolving in acidulated water, precipitating by table salt, expressing strongly, drying, and macerating the thin dry sheet of pepsin for a short time in water. *E. Scheffer.*

Saccharated Pepsin.

℞ Pepsin, prepared as above, and yet damp,
Sugar of milk, each, sufficient.

Triturate the pepsin with sufficient milk sugar, so that ten grains of the air dry powder will dissolve not less than one hundred and twenty grains of coagulated albumen if digested with an excess of the latter, for five or six hours at 100° in water, each fl. ounce of which is acidulated with six drops of muriatic acid. *E. Scheffer.*

Dose, five to ten grains, or more, in dyspepsia, to be taken immediately before or with a meal, together with lactic or diluted muriatic acid, when there is a deficiency of acid in the stomach.

Wine of Pepsin.

℞ Mucous membrane of hog's stomach, or of beef rennet, one hundred parts.
Glycerin,
Distilled water, each, fifty parts.
Good white wine, one thousand parts.
Muriatic acid, five parts.

Mix thoroughly the mucus, glycerin, and water, and agitate well with the remaining

liquids; macerate for three days at or below 98°, and filter. *Ph. Germ.*

Rennet Wine.—Liquid Rennet.

℞ Mucous membrane of calves' rennet, three parts.
White wine, twenty-six parts.
Chloride of sodium, one part.

Macerate for three days, and filter. *Ph. Germ.*

PETROLEUM.

Petroleum.

A liquid bitumen, of a fluid consistence, of a brownish-black or reddish-brown color, having a bituminous odor, and an acrid, strong taste. It is found in various parts of the world, issuing from the earth in the form of springs. Many of these exist in the United States, as in the western portion of Pennsylvania, on the shores of Seneca Lake, on the Kenhawa, etc. These products are light-colored and more liquid than the Barbadoes and other foreign varieties, and are known as Seneca oil.

Petroleum is a stimulating antispasmodic, and sudorific, with some anthelmintic properties. The dose is from half a drachm to a drachm.

By fractional distillation on a large scale, various hydrocarbons of different boiling points are obtained, which are sold under the name of rhigolen, gasolin, benzin, etc. The lightest of these, having at the same time the lowest boiling point, have been used locally for anæsthetic purposes. Benzin, which is the heavier of these light portions, is largely used in the arts, being a valuable solvent, capable to replace in many cases ether, chloroform, oil of turpentine, etc. The still heavier colorless fraction of petroleum is extensively employed for illuminating purposes.

British Oil.

℞ Oil of turpentine,
" flaxseed, each, eight fl. ounces.
" amber, four fl. ounces.
" juniper, four fl. drachms.
Barbadoes petroleum, three fl. ounces.
Seneca oil, one fl. ounce.

Mix. As a rubefacient liniment. *Phil. Coll. Ph.*

℞ Oil of turpentine, eight fl. ounces.
Barbadoes petroleum, four fl. ounces.
Oil of rosemary, four fl. drachms.

Mix. *Gray.*

Embrocation of Petroleum.

℞ Petroleum, half an ounce.
Oil of turpentine, one drachm.
Spirit of juniper, four ounces.

Mix. As a friction to the loins, in atony of the urinary passages and dropsy. *Radius.*

℞ Petroleum, half an ounce.
Spirit of lavender, one ounce.
Laudanum, two drachms.

Mix. As a lotion to frozen limbs. *Phœbus.*

℞ Crude petroleum,
Glycerin, each, one ounce.

Mix. In scabies of children. *Monti.*

℞ Petroleum, one drachm and a half.
Spirit of ammonia, two ounces.

Mix. As a remedy for chilblains. *Radius.*

Ointment of Petroleum.

℞ Petroleum, three drachms.
Camphor, one scruple.
Simple ointment, one ounce and a half.

Mix. *Radius.*

Plaster of Petroleum.

℞ Resin, half an ounce.
Camphor, one drachm.
Opium, half a drachm.
Petroleum, sufficient.

Mix. As an application in chronic rheumatism. *Radius.*

Anthelmintic Mixture of Petroleum.

℞ Petroleum, half an ounce.
Tincture of assafetida, six drachms.

Mix. Forty drops, three times a day, in cases of tapeworm. *Schwartz.*

Diuretic Mixture of Petroleum.

℞ Petroleum, two drachms.
Tincture of squill, one drachm.
Spirit of juniper, six drachms.

Mix. Forty drops, three times a day, in dropsy. *Vogt.*

PETROSELINUM.

Parsley.

Parsley, or *Petroselinum sativum*, is a biennial herbaceous plant, with a fusiform root; a native of southern Europe, but generally cultivated in our gardens, for the sake of its leaves, which are used for culinary purposes.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Apiaceæ.

Hoffmann, Umb. 1, tom. 1. Griffith, Med. Bot. 318.

The root, which is the officinal portion, is fusiform, white, fleshy, of a pleasant odor and a somewhat sweetish, aromatic taste, becoming inert when kept for some time in the dry state; it should therefore be used in the recent state, or recently dried. It is diuretic and slightly aperient.

Infusion of Parsley Root.

℞. Parsley root, one ounce.
Boiling water, one pint.

Infuse and strain. A teacupful, with a drachm of sweet spirit of nitre, every three or four hours. *Ellis.*

In strangury from blisters; and highly spoken of by Dr. Chapman, in dropsies.

Oil of Parsley.

℞. Parsley seed, one part.
Water, four parts.

Distil, and separate the oil.

Carminative, and also said to be very efficacious in gonorrhœa, in doses of three or four drops, three times a day.

PHLORIDZINUM.

Phloridzin.

A bitter principle obtained from the bark of the apple, pear, cherry, and plum-trees, especially from that of the root. It is white, very bitter, and is said to be a powerful febrifuge. It is obtained by boiling the fresh bark of the root for two hours in sufficient water to cover it, decanting the decoction, and renewing the process. The two decoctions are united, permitted to stand for twenty-four hours, when a deposit of phloridzin will take place, and, by evaporation, an additional portion will be obtained. This impure product is to be treated with distilled water and animal charcoal, to purify it.

Powder of Phloridzin.

℞. Phloridzin, ten to fourteen grains.
Sugar, one drachm.

Mix. In the apyrexia of intermittent fever. *De Koninck.*

PHOSPHORUS.

Phosphorus.

An elementary substance, usually in the form of thin sticks, which are translucent, of a pale-yellowish color, and flexible consistence. It has no perceptible taste, but an alliaceous odor. It is principally made from bone ashes, which consist mainly of phosphate of calcium. It is a highly powerful, diffusible stimulant, and ought never to be given in substance, and its effects should be always closely watched. It has been given in cases of extreme prostration of the vital powers.

Phosphorated Oil.

℞. Phosphorus, one part.
Almond oil, fifty parts.

Fuse the phosphorus in the oil, placed in a water-bath, stirring frequently; then agitate occasionally until cold, decant from the phosphorus, and keep in well-stopped vials in a cool place. *Paris Codex.*

Dose, five to ten drops in some mucilaginous liquid.

℞. Phosphorus, well dried, one part.
Oil of almonds, eighty parts.

Digest by the aid of warm water and agitation, cool for half an hour, and carefully decant the oil from any undissolved phosphorus. Dose, five to fifteen drops. To be prepared only for immediate use. *Ph. Germ.*

Has been advised in gout, chronic rheumatism, etc., and also externally, as a friction.

Emulsion of Phosphorated Oil.

℞. Phosphorated oil,
Powdered gum Arabic,
each, two drachms.
Mint water, three troyounces.
Simple syrup, two troyounces.

Make an emulsion. Dose, a tablespoonful. *Soubeiran.*

Pills of Phosphorus.

℞. Phosphorus, one grain and a half.
Almond oil, four drachms.

Dissolve by aid of a water-bath, add sufficient magnesia, and make one hundred pills. *Bouchardat.*

℞. Phosphorus, one grain and a half.
Almond oil,
Powdered soap,
each, ninety grains.

Dissolve the phosphorus in the oil, add the soap and sufficient marshmallow, in powder, to make one hundred pills. *Tavignot.*

Dose, three to five a day. The oil may be advantageously substituted by suet, cacao-butter, oil of mace, or other solid fats.

Phosphorated Ether.

℞ Phosphorus, one part.
Ether, fifty parts.

Macerate for a month in a bottle covered with black paper; decant into small bottles similarly prepared. Dose, five to ten drops, in some emollient liquid, every four hours. *Paris Codex.*

℞ Phosphorus, two grains.
Oil of peppermint, half a drachm.

Add to the solution

Ether, half fl. ounce.

Mix well. Two to six drops, every four hours, on sugar. In epilepsy, paralysis, etc. *Augustin.*

Tincture of Phosphorus.

℞ Phosphorus, one grain.
Absolute alcohol, twelve drachms.

Dissolve by digestion. Dose, ten to fifteen minims, largely diluted. *J. A. Thompson.*

Phosphorated Cerate.

℞ Phosphorated ether, five parts.
Simple cerate, twenty-four parts.

Mix. As a friction in obstinate cutaneous affections. *Foy.*

Phosphorated Oil of Turpentine.

℞ Phosphorus, two grains.
Oil of turpentine, three fl. drachms.

Mix, and dissolve. Dose, ten to twelve drops, in obstinate intermittents; to be given in a cupful of oatmeal gruel.
Hufeland.

Phosphorated Liniment.

℞ Phosphorus, six grains.
Oil of almonds, one ounce.
Caustic ammonia,
Camphor, each, two grains.

Mix. *Augustin.*

Phosphorated Ointment.

℞ Phosphorus, one part.
Lard, one hundred parts.

Fuse in a bottle placed in a water-bath, then agitate until solution has taken place, and afterwards occasionally until cold. In paralytic affections. *Paris Codex.*

℞ Phosphorus, ten grains.
Camphor, two scruples.
Lard, one ounce.

Mix carefully, and make an ointment. Used in palsies, by rubbing in twice daily.
Hufeland.

Phosphorus Paste.
(Rat's Bane.)

℞ Phosphorus, eight parts.
Lukewarm water, } each, one hundred and
Rye meal, } eighty parts.
Melted butter, }
Sugar, one hundred and twenty parts.

Liquefy the phosphorus in the water; pour into a mortar, and add the meal; when cold, add the butter and sugar. An active poison for rats and mice. *Simon.*

PHYSOSTIGMA

Calabar Bean.—Ordeal Bean.

This is the seed of *Physostigma venenosum*, of Western Africa.

Sex. Syst. Diadel. decand. *Nat. Syst.* Fabaceæ.

Balfour, in Transactions of the Roy. Soc. Edinb. xxii. 305.

The seeds are nearly an inch in length, flattish kidney shaped, with a hard, brittle, and shining brown testa and marked with a conspicuous furrow along its convex margin. The white kernel is hard, pulverizable, and has a rather bland taste, free from bitterness or acrimony. It acts as an excitant of the secretory system, increasing more especially the action of the alimentary mucous glands, and in large doses destroys the power of the spinal cord in conducting impressions, resulting in muscular paralysis or paralysis of the heart. Applied to the eye it contracts the pupil. The dose of the powder is one grain, cautiously increased to five or six grains.

Extract of Calabar Bean.

℞ Calabar bean, in moderately fine powder, twelve troyounces.
Alcohol, sufficient.

Obtain by percolation two pints of tincture, or enough to exhaust the powder, recover most of the alcohol by distillation, and evaporate the residue to the consistence of a soft extract. *U. S. Ph.* and *Brit. Ph.*

Dose, one-sixteenth to one-fourth or half a grain.

Tincture of Calabar Bean.

℞. Powdered Calabar bean, one drachm.
Alcohol, one fl. ounce.

Macerate for a week and filter. Dose, twenty minims thrice daily, carefully increased to fifty or sixty minims, in chorea. *Ogle.*

Powder of Calabar Bean and Rhubarb.

℞. Powdered Calabar bean,
" rhubarb,
each, sixty grains.

Mix, and divide into twenty powders. Dose, from three to five powders during twenty-four hours, in hysteria. *Fenwick.*

Hypodermic Injection of Calabar Bean.

℞. Extract of Calabar bean, one-third of a grain.
Distilled water, ten minims.

Dissolve, and carefully neutralize the solution with bicarbonate of potassium. In tetanus. *Haining.*

Glycerite of Calabar Bean.

℞. Extract of Calabar bean, one grain.
Glycerin, sixty-five grains.

Dissolve. *Dorvault.*

Dose, four drops four times a day, in constipation.

Paper of Calabar Bean.

White filtering paper is impregnated with the glycerite or with alcoholic solution of extract of Calabar bean, and dried. Each square centimetre should contain two milligrammes of the extract. *Dorvault.*

PHYTOLACCA.

Poke.

Both the berries and the root of the Poke, or *Phytolacca decandra*, are officinal. It is a large, herbaceous plant, with a perennial root, and bearing numerous clusters of dark-purple berries.

Sex. Syst. Decand. decagyn. *Nat. Syst.* Phytolaccaceæ.

Linn. Sp. Pl. 631. Griffith, Med. Bot. 535.

The root, as found in the shops, is in transverse slices, of a light-brown color externally; and exhibiting on the cut surfaces numerous concentric rings. The taste is somewhat saccharine, followed by a sensation of acrimony; the odor of the fresh root is somewhat like that of ginseng, but this disappears on drying. It is emeto-cathartic, with some narcotic properties. It has been used as an alterative, in syphilis, rheumatism, and chronic eruptions. The berries have also been praised in the same complaints. The dose of the powdered root is from one to five grains as an alterative; from ten to thirty as an emetic.

Ointment of Poke.

℞. Powdered root or leaves of poke, one drachm.
Lard, one ounce.

Rub together. As an application in tinea capitis, psora, etc. *Wood.*

Tincture of Poke Root.

℞. Powdered poke-root, six troyounces.
Cardamom, two drachms.
Diluted alcohol, two pints.

Macerate for two weeks, express, and filter. *Maryland Coll. Ph.*

Tincture of Poke-Berries.

℞. Bruised poke-berries, four ounces.
Diluted alcohol, one pint.

Macerate for fourteen days, and filter. Dose, a teaspoonful, in chronic rheumatism.

PIMENTA.

Pimento.—Allspice.

This, which is also called *Jamaica pepper*, is the unripe berries of *Eugenia pimenta*, a beautiful evergreen tree, which is indigenous to the West Indies and South America.

Sex. Syst. Icosand. monog. *Nat. Syst.* Myrtaceæ.

De Candolle, Prod. iii. 285. Griffith, Med. Bot. 300.

The berries, which are the officinal part, are collected before they are ripe, and dried in the sun. In this state they are round, brown, somewhat rough, and a little larger than a pepper-corn. They have an aromatic, agreeable odor, and a powerful, clove-like taste. Pimento is a warm, aromatic stimulant, but is more employed as a condiment than in medicine. The dose, in powder, is from ten to forty grains.

Bolus of Allspice.

℞. Powdered allspice, " cinnamon, " saffron, each, four grains.
" opium, one grain.
Conserve of roses, sufficient.

Mix, and make two boluses. In chronic diarrhœa. *Foy.*

Water of Allspice.

℞ Allspice, bruised, fourteen ounces.
Water, twenty pounds.
Distil ten pounds. *Brit. Ph.*

Used as a carminative. Dose, one to two fl. ounces.

Spirit of Allspice.

℞ Oil of pimento, two fl. drachms.
Diluted alcohol, one gallon.
Dissolve the oil in the alcohol.
U. S. Ph. 1850.

Tincture of Allspice.

℞ Allspice, one part.
Alcohol, five parts.
Macerate for fifteen days, and filter. Dose, from ten to twelve drops. *Swediaur.*

Essence of Allspice.

℞ Oil of pimento, one fl. ounce.
Rectified spirit, nine fl. ounces.
Mix with agitation. Dose, thirty drops, as a carminative. *Dub. Ph.* 1826.

PIPER.

Black Pepper.

This article is the berries of *Piper nigrum*, a perennial, shrubby vine, from eight to twelve feet high, a native of India, and extensively cultivated in many parts of tropical Asia.

Sex. Syst. Diand. trigyn. *Nat. Syst.* Piperaceæ.

Linn. Sp. Pl. 40. Griffith, Med. Bot. 564.

The fruit, which is the officinal part, is gathered before it is quite ripe, and by the drying of the pulp over the grayish-white seed, becomes wrinkled and black; in this state it is known as *black* pepper; if permitted to ripen, and deprived of the skin by maceration, and dried, the fruit forms what is called *white* pepper, which is less active than the black.

Black pepper is a warm, carminative stimulant, but is principally used as a condiment. It has, however, been used in gonorrhœa, etc., and in the treatment of intermittent fevers, and also as an external application, in the form of ointment, to tinea capitis. The dose is from ten to twenty grains.

Confection of Black Pepper.

℞ Powdered black pepper, two ounces.
" caraway, three ounces.
Clarified honey, fifteen ounces.
Mix thoroughly. Dose, one to two drachms. *Brit. Ph.*

A substitute for Ward's paste.

This, which is similar to *Ward's paste*, so celebrated in the cure of piles, must be used for a length of time, to be of service. Dose, from one to two drachms, two or three times a day.

Electuary of Black Pepper.

℞ Powdered black pepper,
Conserve of orange-peel, each, one ounce.
Syrup of orange-peel, sufficient.
Make an electuary. As a stomachic and carminative. A drachm twice a day. *Saunders.*

Resinous Oil of Black Pepper.

℞ Black pepper, at will.
Grind it, and exhaust by means of alcohol (.835); distil off the alcohol. Treat the resinous residue with solution of potassa, which removes all but the peperina. The alkaline liquid is then to be saturated with diluted muriatic acid, and the fluid oleoresin that precipitates is, after being washed with water, ready for use. *W. Procter.*

Oleoresin of Black Pepper.

℞ Black pepper, in fine powder, twelve troyounces.
Ether, sufficient.
Put the powder in a percolator, press firmly, and pour ether gradually upon it until twenty fl. ounces of tincture pass. Distil off most of the ether, and expose the residue in a shallow vessel till all the ether is evaporated, and the deposition of piperina has ceased. Lastly, separate the piperina by expressing.
Dose, one or two drops. *U. S. Ph.*

Volatile Oil of Black Pepper.

℞ Powdered black pepper, at will.
Water, sufficient.
Distil, and separate the oil from the product. This has the odor, but not the pungency of the fruit.

Ointment of Black Pepper.

℞ Powdered black pepper, four ounces.
Lard, one pound.
Mix. As an application in tinea capitis. *Dub. Ph.* 1826.

Plaster of Black Pepper

℞ Powdered black pepper,
Galbanum, each, three drachms.
Pitch, two ounces.
Oil of laurel berries, sufficient.

Mix. As a stimulating plaster, in rheumatism, etc. *Augustin.*

Cataplasm of Black Pepper.

℞ Flour of mustard, half a pound.
Powdered black pepper,
" ginger,
each, one drachm.
Boiling water, sufficient

to make a soft paste. To be applied to the pit of the stomach in colic, etc.; or to the feet, as a revulsive. *Ellis.*

PIPER LONGUM.

Long Pepper.

This is the dried spikes of the *Piper longum*, or *Chavica officinarum*, a climbing shrub, with dicœcious flowers, a native of some of the East India islands, and cultivated in Sumatra and Java.

Linn. Sp. Pl. 41. Griffith, Med. Bot. 566.

The officinal portion is the fruit catkins, dried in the sun. These are aromatic; of a pungent, fiery taste; of a grayish-brown color; cylindrical. This pepper has nearly the same properties as the black, but it is little used in this country.

Cataplasm of Long Pepper.

℞ Powdered long pepper,
" ginger,
each, half an ounce.
White of egg, sufficient.

Mix well into a paste. As a rubefacient application in pleurisy. *Foy.*

PIPERINA.

Piperina.

A peculiar principle obtained from *Piper nigrum*. It is white, and crystallizes in four-sided prisms. It was thought to be an alkali, but the experiments of Pelletier show that it is more analogous to the resins. It has been much praised in Italy, as a febrifuge; and is also spoken of with favor by physicians of other countries. It has been supposed that its acrid taste and remedial properties were dependent on an admixture of acrid oil, but Dr. Christison attempts to prove that such is not the case.

℞ Alcoholic extract of
black pepper, at will.

Treat it with water containing a hundredth of caustic potassa; wash the residue in cold water; dissolve in alcohol; filter, and permit to evaporate and crystallize. *Guibourt.*

Dose, from two to ten grains.

Pills of Piperina.

℞ Piperina, twenty-four grains.
Crumb of bread, sufficient.

Mix, and make twelve pills. One, every two hours. *Meli.*

℞ Piperina, twelve grains.
Extract of gentian, sufficient.

Mix, and make twelve pills. One, every hour, during the apyrexia of intermittents. *Ellis.*

Pills of Piperina and Mercury.

℞ Blue pill, one grain.
Piperina,
Sulphate of quinia,
each, two grains.
Syrup, sufficient.

Mix, and make a pill. *Hartte.*

One, three times a day, for a few days. after the paroxysm has been checked by piperina.

Tincture of Piperina.

℞ Piperina, one part.
Alcohol, seven parts.

Dissolve, and filter. *Béral.*

PISCIDIA ERYTHRINA.

Jamaica Dogwood.

This is a small West Indian tree, with a hard, heavy wood, and a narcotic bark, employed to intoxicate fish.

Sex. Syst. Diadelph. decand. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 993. Griffith, Med. Bot. 246.

The part used is the bark of the root, which appears to be a stimulating narcotic; causing excitement of the system, copious perspiration, and profound sleep. Applied topically to allay pain.

Tincture of Jamaica Dogwood.

℞ Bruised Jamaica
dogwood, one ounce.
Alcohol, four fl. ounces.

Digest for seven days, and filter. Full dose, as a narcotic, one fl. drachm.

Hamilton.

PIX BURGUNDICA.

Burgundy Pitch.

This is the prepared resinous exudation of *Abies excelsa*, a lofty tree, a native of Europe and northern Asia.

Sex. Syst. Monœc. monadelph. *Nat. Syst.* Pinaceæ.

De Candolle, Fl. Fr. iii. 375. Griffith, Med. Bot. 606.

It is also obtained from *A. picea.*

When pure it is hard, brittle, opaque, of a yellowish or brownish-yellow color, and of a weak, turpentine-like taste and odor. The *Thus* of the *Brit. Ph.* is the concrete turpentine of *Pinus palustris* and *P. tæda.* It is in solid, brittle tears, of a bright-yellowish color, and emits an agreeable odor when burned.

Both are used as ingredients in plaster.

Prepared Thus or Common Frankincense.

℞ Frankincense, one pound.
Water, sufficient to cover.

Liquefy by heat, strain through a hair sieve, and when cold pour off the water. Used for making plasters. *Lond. Ph.*

Pitch Plaster.

℞ Burgundy pitch,
twenty-six ounces.
Prepared thus, thirteen ounces.
Resin,
Yellow wax, each, four ounces and a half.
Expressed oil of nutmeg,
one ounce.
Olive oil,
Water, each, two fl. ounces.

Melt the thus, pitch, resin, and wax together, and add the olive oil, oil of nutmegs, and water; mix, and evaporate to a proper consistence. *Brit. Ph.*

As a rubefacient plaster in pectoral and rheumatic affections, etc. It often causes a serous discharge, and much irritation.

℞ Burgundy pitch, six ounces.
Wax, half an ounce.
Turpentine, one drachm.

Melt, and mix. *Guy's Hosp.*

Burgundy Pitch Plaster.

℞ Burgundy pitch, six pounds.
Yellow wax, half a pound.

Melt, and stir constantly till they thicken. *U. S. Ph.*

Warming Plaster.

℞ Burgundy pitch,
forty-eight troyounces.
Cerate of Spanish flies,
four troyounces.

Melt together on a water-bath, and stir constantly till they thicken. *U. S. Ph.*

Irritating Pitch Plaster.

℞ Burgundy pitch, thirty-two parts.
Common turpentine,
Yellow wax, each, twelve parts.
Euphorbium, in very fine powder, three parts.

Melt the first three articles together, add the powder, and mix well. *Ph. Germ.*

Aromatic Plaster.

℞ Resin of spruce fir, three ounces.
Yellow wax, half an ounce.
Powdered cinnamon, six drachms.
Oil of pimento,
" lemon, each, two drachms.

Melt the resin and wax together, and strain. When they begin to thicken, on cooling, mix in the cinnamon, previously rubbed with the oils, and make a plaster.
Dub. Ph. 1826.

A good local stimulant, when applied to the region of the stomach, allaying nausea and vomiting, and relieving gastric uneasiness.

Compound Pitch Plaster.

℞ Burgundy pitch, two parts.
White wax, four parts.
Turpentine,
Balsam of tolu, each, one part.

Mix and melt. *Béral.*

Pitch Cerate.

℞ Burgundy pitch, two parts.
Common turpentine,
Suet, each, one part.
Yellow wax, four parts.

Melt together. *Ph. Germ.*

Pills of Burgundy Pitch.

℞ Burgundy pitch, five drachms.
Mucilage, sufficient.

Mix, and make one hundred pills. Six to eight, three times a day, in cutaneous affections. *Ulrich.*

PIX CANADENSIS.

Canada or Hemlock Pitch.

This is the prepared resinous exudation of the *Abies Canadensis*, a lofty tree, found in the more northern parts of the United States, in Canada, etc., and also in the mountainous portions of the Middle States.

Sex. Syst. Moncœc. monodelph. *Nat. Syst.* Pinaceæ.

Mich. N. A. Sylv. iii. 185. Griffith, Med. Bot. 606.

The resin exudes spontaneously, and hardens on the bark, from which it is separated by boiling in water. It, however, requires a purification, by melting and straining, before it is fit for use. In this state, it is hard, brittle, of a dark yellowish-brown color, which becomes darker by exposure to the air, of a peculiar but faint odor, and a scarcely perceptible taste.

It is a mild rubefacient, much resembling Burgundy pitch in its actions and powers, and is employed for the same purposes.

The volatile oil obtained from the tops by distillation, and called the *oil of hemlock*, is possessed of emmenagogue properties. It has been used to produce abortion.

Hemlock Pitch Plaster.

℞ Hemlock pitch, seventy-two troyounces.
Yellow wax, six troyounces.

Melt together, strain, and stir while cooling. *U. S. Ph.*

PIX LIQUIDA.

Tar.

This is an impure turpentine, obtained by the slow combustion of various species of the pine tribe, and more especially of the pinus palustris. It is made in large quantities in North Carolina, and in various other places in America and Europe.

It is of a brownish-black color, of a tenacious consistence, has a peculiar empyreumatic odor, and a somewhat bitter, resinous, subacrid taste.

Its properties are analogous to those of the turpentines. It is used both internally and externally. The dose is from half a drachm to one drachm, several times a day.

Tar Pills.

℞ Tar, one drachm.
Powdered elecampane, sufficient.

Mix, form a mass, and divide into twenty pills. *Beasley.*

℞ Tar, one drachm.
Wheat flour, sufficient.

Mix, form a mass, and divide into twenty pills. *G. B. Wood.*

℞ Tar, two scruples.
Liquorice powder, one scruple.

Mix, and make sixteen pills. *Seymour.*

Tar Water.

℞ Tar, one pint.
Water, four pints.

Mix, and shake frequently for twenty-four hours, decant, and filter. *U. S. Ph.*

℞ Tar, one part.
Boiling water, ten parts.

Macerate for two days, with frequent agitation, and decant. *Ph. Germ.*

℞ Tar, one part.
Water, thirty parts.

Macerate for a day and reject the water, then macerate with same quantity of water for ten days, and decant. *Paris Codex.*

It is stimulant and diuretic, and was once much used in a variety of diseases, especially in those of the lungs. The dose is from one to two pints, in divided doses, in the course of the day. It is also used as a lotion in cutaneous diseases.

Syrup of Tar.

℞ Tar water, twenty-one parts.
Sugar, forty parts.

Dissolve, and strain. *Paris Codex.*

Glycerite of Tar.

℞ Tar, one troyounce.
Carbonate of magnesium, two troyounces.
Glycerin, four fl. ounces.
Alcohol, two fl. ounces.
Water, ten fl. ounces.

Bub the tar with the carbonate, then with the mixed liquids, in three portions, expressing each time, then pack the residue into a percolator, and pass first the expressed liquids, afterwards water, until one pint is obtained. *U. S. Ph.*

Dose, one to four fl. drachms.

Wine of Tar, or Tar Beer.

℞ Water, three quarts.
Wheat bran, one quart.
Tar, one pint.
Honey, half a pint.

Simmer together for three hours, and when cool add a pint of brewers' yeast, and let it stand for thirty-six hours. Then bottle.

Dose, a tablespoonful. *Duhamel.*

℞ Ground malt, Honey, Tar, each, one pound.
Yeast, half a pint.
Water, sufficient.

Keep the malt, honey, and three quarts of water, at 150° F. for three hours, and when cool add the yeast. Set aside for thirty-six hours, then decant, and to the clear solution add the tar, stirring constantly. Shake up occasionally for a week, then filter, and bottle for use. *W. Procter, Jr.*

℞ Strong beer, one gallon.
Tar, sufficient to saturate.

Mix, and allow them to macerate for three days, with occasional agitation. Dose, a tablespoonful. *Robinson.*

Tar Ointment.

℞ Tar,
Suet, each, twelve troyounces.

Melt the suet with a moderate heat, add the tar, strain, and stir till cold. *U. S. Ph.*

℞ Tar, five ounces.
Yellow wax, two ounces.

Melt the wax, add the tar, and stir till cold. *Brit. Ph.*

℞ Purified tar, one part.
Lard, three parts.

Mix. *Paris Codex.*

A stimulant application to various cutaneous eruptions, as psoriasis and tinea capitis.

Compound Tar Ointment.

℞ Tar ointment,
Cerate of subacetate of lead, each, half a pound.

Mix. *St. Bart's Hosp.*

℞ Tar ointment,
Sulphur ointment, equal parts.

Mix. *Guy's Hosp.*

PIX NIGRA.

Black Pitch.

This is the solid black mass that remains after the evaporation of tar. It has a shining fracture. If is gently stimulant and tonic, and has been used internally in some cutaneous diseases, and in piles. The dose is from ten grains to a drachm, in piles. It is also employed externally.

Ointment of Black Pitch.

℞ Black pitch, Wax, Resin, each, eleven ounces.
Olive oil, (imp.) one pint.

Melt together, and strain. *Lond. Ph.*

Used for the same purposes as tar ointment.

Plaster of Black Pitch.

℞ Black pitch, Resin, Suet, Turpentine, each, two parts.
Yellow wax, three parts.

Melt together. *Niemann.*

Pills of Black Pitch.

℞ Black pitch, one drachm.
Powdered gum Arabic, half a drachm.

Mix, and divide into twenty pills. Dose, two every night, in piles. *Wardleworth.*

PLATINUM.

Platina.

PLATINI BICHLORIDUM.

Bichloride of Platina.

Made by dissolving platinum in nitro-muriatic acid, and evaporating the solution to dryness by a gentle heat. *Beasley.*

It, as well as a concentrated solution, is of a deep red color. It is very deliquescent and soluble in water. It is poisonous in the dose of fifteen grains, but has been used as an alterative in syphilis, in doses of one-eighth to one-fourth of a grain.

Mixture of Bichloride of Platinum.

℞ Bichloride of platinum, two to four grains.
Sugar, two drachms.
Distilled water, three fl. ounces.

Dissolve. Dose, a tablespoonful, three times a day. *Hoefer.*

Pills of Bichloride of Platinum.

℞ Bichloride of platinum, seven and a half grs.
Guaiacum, one drachm.
Powdered liquorice root, sufficient.

Mix, and form twenty pills. One pill three times a day. *Hoefer.*

Ointment of Bichloride of Platinum.

℞. Bichloride of platinum, one drachm.
Extract of belladonna, two drachms.
Lard, four ounces.

Rub well together. As an application to indolent ulcers. *Hoefer.*

PLATINI ET SODII CHLORIDUM.

Chloroplatinate of Sodium.

Mix a solution of six parts of chloride of sodium with a solution of seventeen parts of bichloride of platina; evaporate and crystallize. The crystals are of a deep yellow color, soluble in water and alcohol. They are similar in their medical properties to the analogous salt of gold. Dose, one grain. *Beasley.*

Injection of Chloroplatinate of Sodium.

℞. Chloroplatinate of sodium, half a drachm.
Decoction of poppies, eight fl. ounces.

Dissolve. Used as an injection in gonorrhœa. *Hoefer.*

PLUMBUM.

Lead.

A soft, bluish-gray, malleable metal, with a perceptible taste, and a peculiar smell when rubbed. It is not officinal in its metallic state, but its preparations are much employed as sedatives and astringents.

PLUMBI ACETAS.

Acetate of Lead.

Powder of Acetate of Lead.

℞. Acetate of lead,
Powdered opium, each, six grains.
Sugar, twenty-four grains.

Mix. Three grains, morning and evening, to check night sweats and diarrhœa, in phthisis. *Foy.*

℞. Calomel, one or two grains.
Acetate of lead, half to one grain.

Mix, and divide into four powders. One, every three hours, in cholera infantum of infants. *Ellis.*

℞. Acetate of lead, two to three grains.
Opium, a quarter of a grain.
Acetate of sodium, three grains.
Sugar of milk, five grains.

Mix. To be taken every hour, in hemorrhages. *Phœbus.*

Pills of Acetate of Lead.

℞. Acetate of lead,
Powdered mallow, each, one drachm.
Simple syrup, sufficient.

Mix, and make thirty-six pills. Four to five a day, to check sweats in phthisis. *Radius.*

℞. Acetate of lead, half a drachm.
Calomel, five grains.
Conserve of roses, sufficient.

Mix, and make ten pills; one, every two to four hours, in hematemesis. *Ellis.*

℞. Acetate of lead, thirty grains.
Powdered colchicum, twenty grains.
" opium, three grains.
Mucilage of gum Arabic, sufficient.

Mix thoroughly, and form into ten pills. One to be taken every six hours. Used in active hemorrhages, washed down with a draught of one drachm of distilled vinegar to one fl. ounce of water. Also given in phthisis, after bleeding, one twice a day. *A. T. Thomson.*

℞. Acetate of lead, one scruple.
Opium, one grain.
Conserve of roses, sufficient.

Mix, and make twelve pills. One every hour at first, then every two hours, in cholera. *Graves.*

℞. Acetate of lead, twelve grains.
Opium, six grains.
Conserve of roses, sufficient.

Mix, and make six pills. One, to be repeated according to circumstances, in hemoptysis, etc. *Ellis.*

℞. Acetate of lead, six grains.
Powdered mallow,
Extract of seneka, each, one drachm.

Mix, and make sixty pills. Two to five, several times a day, in hemoptysis. *Koop.*

Rubefacient Paste.

℞. Acetate of lead, one ounce.
Bisulphate of potassium, three ounces.
Water, sufficient.

Rub into a paste. It acts powerfully on the skin. *Clarus.*

Collyrium of Subacetate of Lead.

℞. Solution of subacetate of lead, twelve drops.
Wine of opium, forty drops.
Rose water, four fl. ounces.

Mix. *Ellis.*

℞. Acetate of lead, one scruple.
Lime water, twelve fl. ounces.
Catechu, three drachms.
Honey of roses, two ounces.

Dissolve and filter. This is much more astringent than the last. *Augustin.*

Solution of Subacetate of Lead. (Goulard's Extract.)

℞. Acetate of lead, sixteen troyounces.
Powdered litharge, nine troyounces and a half.
Boiling water, four pints.

Boil together for half an hour, adding distilled water so as to preserve the measure, filter, and keep in close-stopped bottles. *U. S. Ph.*

Brit. Ph. directs to boil five ounces of acetate of lead, three and a half of litharge, and twenty of distilled water.

Ph. Germ. directs to triturate three parts of acetate with one of finely powdered litharge, to heat in a porcelain vessel by a water-bath, until the mass becomes white, when it is agitated with ten parts of hot water until cold, then filtered.

The *diluted solution*, or *lead-water*, is made by mixing three fl. drachms of the above solution to a pint of distilled water, *U. S. Ph.;* from half a fl. ounce each of the above solution and alcohol, and thirty-nine fl. ounces of distilled water, *Brit. Ph.;* from one part of above solution and forty-nine parts of distilled water, *Ph. Germ.*

Vegeto-Mineral Water of Goulard.

℞. Solution of subacetate of lead, one part.
Alcohol (.921), four parts.
Distilled water, forty-five parts.

Mix. *Ph. Germ.* and *Paris Codex.*

Used in fomentations, lotions, and cataplasms, and may always be replaced by the diluted solution of the subacetate.

Acetate of Lead Gargle.

℞. Acetate of lead, sixty grains.
Extract of opium, six grains.
Rose water, eight fl. ounces.
Syrup of mulberries, one ounce.

Mix. *Pierquin.*

Subacetate of Lead Gargle.

℞. Solution of subacetate of lead, half a fl. drachm.
Barley water, one pint.
Simple syrup, one ounce.

Mix. *Radius.*

Acetate of Lead Mixture.

℞. Acetate of lead, half an ounce.
Sulphate of iron, three drachms.
Vinegar,
Alcohol, each, two fl. ounces.
Rose water, six fl. drachms.

Dissolve the acetate in the vinegar with a gentle heat; add the sulphate, and then the alcohol, mixed with the rose water. Highly praised in the sweats and colliquative diarrhœa of phthisis; in gonorrhœa and nocturnal emissions. *Gormann.*

Goulard's Balsam.

℞. Oil of turpentine, at will.

Heat, and gradually add

Acetate of lead, sufficient.

Constantly stirring, till no more will dissolve; let rest, and decant while hot. Used as an application to eroding and painful ulcers. *Van Mons.*

Acetate of Lead Cerate.

℞. Acetate of lead, four parts.
Soap, one part and a half.

Mix thoroughly in a heated mortar, and add

White wax, three parts.

Previously melted with

Olive oil, three parts.

Mix well. *Van Mons.*

Subacetate of Lead Cerate. (Goulard's Cerate.)

℞. Solution of subacetate of lead, two fl. ounces and a half.
White wax, four troyounces.

Olive oil, eight troyounces.
Camphor, half a drachm.

Melt the wax, and mix with seven ounces of the oil; remove from fire, and when it begins to thicken, gradually add solution of subacetate of lead; stir till cool, then add camphor, dissolved in rest of oil, and mix. *U. S. Ph.*

The formula of *Brit. Ph.* is very similar, almond oil being used instead of olive oil.

℞. Yellow wax, eight parts.
Lard, twenty-nine parts.

Melt together; when nearly cool add

Solution of subacetate of lead, three parts.

Mix thoroughly. *Ph. Germ.*

℞. Simple cerate, three hundred and fifty grains.
Olive oil, fifty grains.
Goulard's extract, one fl. drachm and a half.
Liniment of camphor, twelve grains.

Mix thoroughly. For extemporaneous preparation. *U. S. Ph.*

Liniment of Subacetate of Lead.

℞. Olive oil, three troyounces.
Solution of subacetate of lead, two troyounces.

Mix. *U. S. Ph.*

℞. Solution of subacetate of lead, Laudanum, Honey of roses, each, two fl. drachms.
Conserve of roses, one ounce.

Mix. *Guy's Hosp.*

Injection of Acetate of Lead.

℞. Acetate of lead, ten grains.
Diluted acetic acid, ten minims.
Acetate of morphia, a quarter grain.
Tepid water, four fl. ounces.

Mix. In dysentery. *Waring.*

Subacetate of Lead Injection.

℞. Solution of subacetate of lead, two fl. drachms.
Distilled vinegar, eight fl. ounces.
Rose water, twenty-four fl. ounces.

Mix. In leucorrhœa. *Young.*

Injection of Subacetate of Lead and Lime Water.

℞. Solution of subacetate of lead, thirty-four drops.
Lime water, four fl. ounces.
Olive oil, two fl. drachms.

Mix, and shake whenever used. In inflammation of the prostate and urethra. *Foy.*

Liniment for Milk Abscess.

℞. Olive oil, two ounces.
Lead water, one drachm.
Ether, two drachms.
Laudanum, one drachm.

Mix. A rag moistened with this liniment to be frequently applied to the inflamed part. *Dewees.*

℞. Acetate of lead, one drachm.
Distilled vinegar, two ounces.

Dissolve, and add

Alcohol, one ounce.
Distilled water, five ounces.

Mix. To be applied as above. *Clarke.*

Acetate of Lead Lotion.

℞. Diluted solution of subacetate of lead, one fl. ounce.
Spirit of camphor, three fl. ounces.
Water, one pint.

Mix. As an application to old ulcers. *Ellis.*

Subacetate of Lead Cataplasm.

℞. Common cataplasm, four ounces.
Solution of subacetate of lead, one fl. ounce.
Chloride of ammonium, half a drachm.

Mix. As an application to indolent tumors. *Radius.*

Suppositories of Lead.

℞. Acetate of lead, thirty-six grains.
Oil of theobroma, three hundred and twenty-four grains.

Mix the acetate with sixty grains of the oil, add to the remainder previously melted, and make twelve suppositories. *U. S. Ph.*

Pile Ointment.

℞. Acetate of lead, fifteen grains.
Burnt cork, half an ounce.
Fresh butter, two ounces.

Triturate well together. *Bories.*

Acetate of Lead Ointment.

℞. Acetate of lead, Extract of belladonna, each, one part.
Lard, six parts.

Mix. As an application to fissures of the anus. *Foy.*

℞. Acetate of lead, in fine powder, twelve grains.
Benzoinated lard, one ounce.

Mix thoroughly. *Brit. Ph.*

Nutritive Ointment.

℞. Litharge, five drachms.
Vinegar, three drachms.
Olive oil (or lard), thirteen drachms.

Rub well together. *Maryland Coll. Ph.*

Subacetate of Lead Ointment.

℞. Cerate of subacetate of lead,
Poplar ointment, each, one ounce.
Powdered camphor, two drachms.

Mix. In inflamed acne and other cutaneous affections. *St. Marie.*

℞. Solution of subacetate of lead,
White wax, each, one drachm.
Olive oil, one ounce.

Mix. As an application in ophthalmia. *Armstrong.*

Plaster of Acetate of Lead.

℞. Acetate of lead, one drachm.
Sulphur, half an ounce.
Resin, two ounces.

Melt together. As an application to venereal buboes. *Bories.*

Subacetate of Lead Plaster.

℞. Olive oil, fourteen fl. ounces.
Yellow wax, twenty-four ounces.

Melt together, and add

Solution of subacetate of lead, one fl. ounce.
Camphor, rubbed in a little oil, half a drachm.

Mix well, and spread on linen or skin. It has been much praised in rheumatic pains and indolent ulcers. *Van Mons.*

PLUMBI CARBONAS.

Carbonate of Lead. (White Lead.—Ceruse.)

Camphorated Powder of Carbonate of Lead.

℞. Carbonate of lead, ten drachms.
Starch, two drachms.
Sarcocolla, Gum Arabic, " tragacanth, each, one drachm.
Camphor, half a drachm.

Triturate together. As an application to ulcers. *Giannini.*

Ointment of Carbonate of Lead.

℞. Carbonate of lead, sixty grains.
Simple ointment, four hundred and twenty grains.

Rub the carbonate with the ointment gradually added, and mix thoroughly. *U. S. Ph.* and *Brit. Ph.*

Paris Codex directs one part of the carbonate to five parts of benzoinated lard; *Ph. Germ.*, one part of carbonate to two parts of lard.

As an application to excoriated or ulcerated surfaces.

℞. Carbonate of lead, six ounces.
Camphor, one ounce.
Olibanum, two ounces.
Rose oil, three ounces.
Whites of eggs, seven.

Triturate together. Same uses as above. *Harrer.*

℞. Carbonate of lead, one ounce.
Litharge, two drachms.
Armenian bole, one ounce.
Honey of roses, half an ounce.
Lard, sufficient.

Triturate together. As a dressing to phagedenic and cancerous ulcers. *Swediaur.*

℞. Carbonate of lead, one ounce.
Opium, one drachm.
Lard, half an ounce.
Anodyne balsam, sufficient.

Mix. As an application in facial neuralgia. *Fouquier.*

Camphorated Carbonate of Lead Ointment.

℞. Ointment of carbonate of lead, twenty parts.
Camphor, one part.

Mix. *Ph. Germ.*

Plaster of Carbonate of Lead.

℞ Litharge, ten parts.
Olive oil, twenty-five parts.

Boil until dissolved, then add

Carbonate of lead, eighteen parts.

Boil to form plaster, and mix thoroughly.
Ph. Germ.

℞ Carbonate of lead, one pound.
Olive oil, two pints.
Yellow wax, four ounces.
Lead plaster, one pound and a half.
Powdered orris root, nine ounces.

Boil together the oil and carbonate of lead, adding a little water, and constantly stirring, till they are perfectly incorporated, then add the wax and plaster; when these are melted, mix in the orris, and stir well.
U. S. Ph. 1830.

As a substitute for *Mahy's plaster*, and a good application to inflamed and excoriated surfaces, as bedsores, etc.

PLUMBI CHLORIDUM.

Chloride of Lead.

℞ Acetate of lead, nineteen ounces.
Chloride of sodium, six ounces.

Dissolve the two salts separately, the former in three pints of boiling, distilled water, the latter in one pint of distilled water; mix the solutions, and wash the precipitate with distilled water. *Lond. Ph.* 1836.

Ointment of Chloride of Lead.

℞ Chloride of lead, one drachm.
Simple cerate, one ounce.

Mix. As an application in cancerous ulcerations. *Tuson.*

Lotion of Chloride of Lead.

℞ Chloride of lead, one drachm.
Water, one pint.

Dissolve. As a wash to cancerous ulcerations, and in painful neuralgic tumors.
Tuson.

PLUMBI IODIDUM.

Iodide of Lead.

℞ Iodide of potassium,
Nitrate of lead,
each, four troyounces.
Distilled water, sufficient.

Dissolve the nitrate in a pint and a half, and the iodide in half a pint of the water, mix, wash the precipitate well, and dry.
U. S. Ph. and *Brit. Ph.*

Pills of Iodide of Lead.

℞ Iodide of lead, three or four grains.
Conserve of roses, one scruple.

Mix, and form twelve pills. One, night and morning, gradually increased, in scrofulous affections. *Foy.*

Powder of Iodide of Lead.

℞ Iodide of lead,
Powdered foxglove,
each, six grains.
Alcoholic extract of
stramonium, two grains.
Sugar, one drachm.

Mix, and divide into twenty-four powders. One four times a day. *Gassicourt.*

Plaster of Iodide of Lead.

℞ Soap plaster,
Resin plaster, each, four ounces.
Iodide of lead, one ounce.

Melt the plasters together, add the finely powdered iodide, and mix intimately.
Brit. Ph.

Ointment of Iodide of Lead.

℞ Iodide of lead, sixty grains.
Simple ointment, four hundred and twenty grains.

Mix thoroughly. As an application to indolent and scrofulous swellings.
U. S. Ph. and *Brit. Ph.*

Paris Codex directs the ingredients in the proportion 1 : 9.

PLUMBI NITRAS.

Nitrate of Lead.

Solution of Nitrate of Lead.

℞ Nitrate of lead, one troyounce.
Water, eight fl. ounces.

Dissolve. This is *Ledoyen's disinfecting fluid;* diluted with water, it furnishes an astringent lotion.

Glycerite of Nitrate of Lead.

℞ Nitrate of lead, ten grains.
Water, two fl. drachms.
Glycerin, six fl. drachms.

Dissolve, and mix. In sore and fissured nipples. *J. G. Wilson.*

PLUMBI OXIDUM.

LITHARGE.

Lead Plaster.—Diachylon.

℞ Litharge, in fine powder, thirty troyounces.
Olive oil, fifty-six troyounces.
Water, sufficient.

Rub the litharge with half the oil, add the remainder and half a pint of water, boil together till a plaster is formed, adding from time to time a little boiling water. *U. S. Ph.*

Brit. Ph. makes lead plaster by boiling four pounds of litharge, one gallon (imp. meas.) of olive oil, and seventy ounces of water; *Ph. Germ.* by boiling equal weights of litharge, olive oil, and lard with a little water.

Soft Lead Plaster.

℞ Lead plaster, three parts.
Lard, two parts.
Suet,
Yellow wax, each, one part.

Melt together, and strain. This is a lead cerate. *Ph. Germ.*

Lead Cerate.

℞ Lead plaster, six parts.
White wax, half a part.

Melt, mix, and add

Olive oil, two parts and a half. *Van Mons.*

Lead Ointment.

℞ Olive oil, ten parts.
Lard,
Butter,
Mutton fat, } each, five parts.
Yellow wax,
Litharge,

Heat the oil, fats, and wax together, till they emit fumes; gradually add the litharge; stir constantly, till the mixture assumes a dark-brown color, and add

Pitch, one part.

Strain. *Paris Codex.*

This preparation is much used in France, under the name of *Onguent de la Mere*, as a maturant to buboes, abscesses, etc.

Compound Lead Ointment.

℞ Lead plaster, three pounds.
Olive oil, eighteen fl. ounces.

Melt together, and add

Prepared chalk, six ounces,
Diluted acetic acid, six fl. ounces,

and stir till cold. *Lond. Ph.*

℞ Lead plaster,
Linseed oil, each, one part.

Melt together, and stir. (*Hebra's lead ointment.*) *Ph. Germ.*

Diapalma Plaster.

℞ Lead plaster, eight pounds.
White wax, eight ounces.

Melt by a gentle heat, and add

Sulphate of zinc, four ounces,

dissolved in a little water; continue the heat, constantly stirring, till all moisture is evaporated. *Paris Codex.*

Gaulthier's Plaster.

℞ Diapalma plaster, twelve parts.
Olive oil,
White wax, each, one part.
Turpentine, two parts.

Melt the first three articles together, with a gentle heat, and add the turpentine. *Guibourt.*

Baynton's Adhesive Paster.

℞ Lead plaster, one pound.
Resin, six drachms.

Melt together, and spread on muslin. *Beasley.*

Lead Cataplasm.

℞ Flaxseed meal,
Arrowroot, each, two ounces.
Water, eleven fl. ounces.
Lead ointment, one ounce.

Mix, and heat to a proper consistence. As a maturating application. *Béral.*

Banyer's Ointment.

℞ Litharge, two ounces.
Burnt alum,
Calomel, each, one ounce and a half.
Lard, two pounds.
Venice turpentine, half a pound.

Mix. As an application in porrigo. *Cazenave & Schedel.*

PLUMBI OXIDUM RUBRUM.

RED LEAD.

Red Lead Plaster.

℞. Yellow wax,
Suet, each, one hundred parts.
Olive oil, forty parts.

Melt, and when nearly cool add the following, previously triturated together:—

Red lead, in fine powder,
one hundred parts.
Camphor, three parts.
Olive oil, sixty parts.

Mix and pour into paper moulds.
Ph. Germ.

Black Plaster.

℞. Red lead, two parts.
Olive oil, four parts.

Mix, and heat till it assumes a dark-brown color, and add

Yellow wax, one part.

Melt, and mix. *Ph. Germ.*

Nuremberg (Universal) Plaster.

℞. Black plaster, one hundred parts.
Camphor, one part.

Melt the plaster, add the camphor previously dissolved in a little olive oil, and pour into paper moulds to harden.
Ph. Germ.

PLUMBI SACCHARAS.

SACCHARATE OF LEAD.

℞. Mix one part of sugar with two parts of nitric acid, diluted with ten of water, and apply heat as long as any reaction takes place; neutralize with chalk, filter, and add to the filtered solution acetate of lead as long as any precipitate is formed; wash this, and dry it.
Beasley.

Nitro-Saccharate of Lead.

℞. Saccharate of lead, at will.

Dissolve in nitric acid, diluted with nineteen parts of water, filter, evaporate, and set aside to crystallize. *Hoskins.*

Solution of Nitro-Saccharate of Lead.

℞. Nitro-saccharate of lead, five grs.
Saccharic acid, twenty-five drops.
Water, five ounces.

Dissolve. Proposed as a solvent for phosphatic calculi. *Hoskins.*

PLUMBI TANNAS.

TANNATE OF LEAD.

℞. Strong infusion of galls, at will.
Solution of acetate of lead,
sufficient.

Add the solution of the acetate, drop by drop, till it no longer causes a precipitate; wash this, and dry it. *Fantonetti.*

Liniment of Tannate of Lead.

℞. Decoction of oak bark, forty parts.
Solution of acetate of lead,
sufficient.

Add the solution of lead to the decoction by degrees, till it causes no precipitate; filter, and when the moist precipitate weighs twelve parts, add

Alcohol, one part.

Recommended in bed-sores. To be made extemporaneously. *Ph. Germ.*

Ointment of Tannate of Lead.

℞. Recent tannate of lead,
twelve parts.
Lard, thirty parts.

Mix. As an application to bed-sores.
Tott.

℞. Oak bark, cut, sixteen parts.
Distilled water, eighty parts.

Digest for two hours, strain, and add

Solution of subacetate of lead,
eight parts.

Collect the precipitate, press lightly, to reduce its weight to eight parts; then mix well with

Glycerin ointment (plasma),
five parts.

As an application to excoriations.
Ph. Germ.

PODOPHYLLUM.

MAY APPLE.

This is the rhizome of the *Podophyllum peltatum*, a native, herbaceous plant, growing in damp situations, having two large peltate, palmate leaves.

Sex. Syst. Polyand. monog. *Nat. Syst.* Berberidaceæ.

Linn. Sp. Pl. 722. Griffith, Med. Bot. 115.

The dried root is about as thick as a quill, of a blackish-brown color externally, and somewhat corrugated; within, it is of a dirty white; it has a faint, but unpleasant odor, and a bitterish, somewhat sweetish taste. It is a purgative of the same character as jalap, and may be given in the same combinations. Dose, ten grains to a scruple.

Extract of May Apple.

℞ May-apple root, in powder, No. 50, twelve troyounces.
Alcohol, two pints.
Diluted alcohol, sufficient.

Obtain by displacement, using first the alcohol, and afterwards diluted alcohol, four pints of tincture, keeping the first two pints separate. Distil and evaporate the two portions separately until they have the consistence of thin honey; then mix them and evaporate to the proper consistence. *U. S. Ph.*

Dose, five to ten grains.

Resin of May Apple. (Podophyllin.)

℞ May-apple root, in powder, No. 60, sixteen troyounces.
Muriatic acid, two fl. drachms.
Alcohol,
Water, each, sufficient.

Displace the powder with the alcohol until twenty-four fl. ounces of tincture have been obtained, or until the percolate ceases to produce turbidity when dropped into water. Distil until reduced to six fl. ounces, add this, with constant stirring, to seven pints of water containing the acid, and set aside to settle. Decant the clear liquid, wash the precipitate twice with water, collect it, and dry. *U. S. Ph.*

Dose, one-quarter to one grain.

Pills of Podophyllin and May Apple.

℞ Podophyllin, five grains.
Extract of May apple, half a drachm.

Mix, and divide into ten pills. Dose, one or two pills. *Thomas.*

Pills of Podophyllin and Iron.

℞ Podophyllin,
White turpentine, each, half a drachm.
Carbonate of iron, one drachm.

Mix well, and divide into thirty pills. *Ecl. Med. Jour.*

Pills of Podophyllin and Belladonna.

℞ Resin of podophyllum, two grains.
Extract of belladonna,
Powdered belladonna root, each, one grain.

Mix, and make six pills. One at bedtime. *Trousseau.*

Compound Pills of Podophyllin.

℞ Podophyllin, Scammony, Gamboge, in powder, each, one drachm.

Rub together for half an hour, and add

Castile soap, half a drachm.

Beat into a mass, and divide into one hundred and twenty pills. *Ecl. Med. Jour.*

POLYGALA RUBELLA.

Bitter Polygala.

Besides the root of *Polygala senega*, several species have been used in medicine, in Europe *P. amara* and *P. vulgaris*, and in this country *P. rubella*. Of these species the entire plants are usually collected. They have a bitter, somewhat sweetish and slightly acrid taste, and have been employed as tonics, and in larger doses as diaphoretics, mainly in the form of infusion.

POTASSIUM.

Potassium

Is a soft, silver-white metal, readily oxidizable by the action of the air; when thrown on water, it takes fire and burns with a rose-colored flame, combining with oxygen, and forming potassa, which is dissolved in the water. It must be kept in liquids into whose composition no oxygen enters, as naphtha, etc. It is not used in medicine, but its numerous compounds are highly important.

℞ Fused carbonate of potassium, one pound.
Iron filings, three quarters of a pound.
Powdered charcoal, one pound.

Mix, and introduce into a gun-barrel or iron bottle, placed in a furnace so made that the flame of a very strong fire may surround it, and maintain every part at a uniform heat approaching to whiteness; the gun-barrel or bottle is to be connected by an iron tube with a copper receiver partly filled with naphtha and surrounded by ice; the heat is to be gradually raised until the requisite temperature is reached, when the potassium will distil over. *Curaudau.*

POTASSA.

Caustic Potassa.

℞ Solution of potassa, one gallon.

Evaporate quickly, in a clean iron vessel, over the fire, till ebullition ceases and the potassa melts. Pour into moulds, and keep in well-stopped bottles. *U. S. Ph.*

A powerful escharotic, used to form issues and in opening abscesses.

Solution of Caustic Potassa.

℞ Caustic potassa, one drachm and a half.
Distilled water, two fl. ounces.

Dissolve. As a rubefacient in tetanus, to be applied to the spine. *Jos. Hartshorne.*

Potassa with Lime.

℞ Potassa,
Lime, each, one ounce.

Rub together into a powder, and keep in a well-stopped bottle. *U. S. Ph.*

Used as the above, but is slower in producing an effect. It is to be made into a paste with a little alcohol.

Solution of Potassa.
(*Sp. gr.* 1.065.)

℞ Bicarbonate of potassium, fifteen troyounces.
Lime, nine troyounces.
Distilled water, sufficient.

Dissolve the bicarbonate in half a gallon of the water, and heat until effervescence ceases. Mix the lime with four pints of the water, add boiling hot to the hot solution of the carbonate, boil the mixture for ten minutes, transfer to a muslin strainer, drain, and wash precipitate with distilled water to make the filtrate measure seven pints; and keep in well-stopped bottles of green glass. *U. S. Ph.*

℞ Caustic potassa, one troyounce.
Distilled water, one pint.

Dissolve. This solution very nearly represents the above. *U. S. Ph.*

Dose, ten to fifteen minims.

Brit. Ph. has a solution of 1.058 sp. gr. containing twenty-seven grains of caustic potassa in the fl. ounce. The solution of *Ph. Germ.* contains one-third of its weight of caustic potassa, and has the sp. gr. 1.332.

Lithontriptic Solution of Caustic Potassa.

℞ Calcined carbonate of potassium, half a pound.
Burnt oyster shells, one pound and a half.
Boiling water, eight pints and a half.

Mix, and let rest for twenty-four hours, and then filter. One fl. drachm three times a day, in flaxseed tea, adding fifteen grains of magnesia to each dose. *Saunders.*

Saviard's Stimulant Lotion.

℞ Caustic potassa, two drachms.
Camphor, two scruples.
Sugar, two ounces.
Water, two pints.

Mix. As an application to indolent ulcers. *Foy.*

Collyrium of Caustic Potassa.

℞ Caustic potassa, one grain.
Distilled water, one ounce.

Dissolve. A drop or two to be introduced into the eye, to remove specks on the cornea. *Gimbernat.*

℞ Caustic potassa, one grain.
Extract of opium, four grains.
Distilled water, four fl. ounces.

Dissolve, and filter. In chronic ophthalmia. *Hamb. Ph.*

Mixture of Caustic Potassa.

℞ Tincture of caustic potassa, half an ounce.
Volatile tincture of guaiacum, two drachms.
Laudanum, half a drachm.

Mix. Twenty drops, three times a day, in gout. *Græfe.*

Injection of Caustic Potassa.

℞ Caustic potassa, half a grain.
Chamomile water, one ounce and a half.
Laudanum, five drops.

Mix. As an injection into the ear, in deafness. *Rust.*

℞ Caustic potassa, two grains.
Distilled water, one ounce.

Dissolve. As an injection at the commencement of gonorrhœa. *Girtanner.*

POTASSA CHLORINATA.

CHLORINATED POTASSA.

Solution of Chlorinated Potassa.

℞. Carbonate of potassium, one part.
Water, ten parts.

Dissolve, and pass a current of chlorine gas through the solution, till it is saturated, and preserve in well-stopped bottles. This is known as *Eau de Javelle*, and is principally used for bleaching, but may be employed as a disinfectant, like Labarraque's liquid. *Guibourt.*

POTASII ACETAS.

ACETATE OF POTASSIUM.

℞ Acetic acid, one pint.
Bicarbonate of potassium, sufficient

to saturate. To be added gradually; filter; evaporate cautiously to dryness, by means of a sand-bath; keep in closely-stopped bottles. *U. S. Ph.*

A diuretic, in doses of a scruple to a drachm; as a laxative, in doses of two or three drachms.

Scillitic Acetate of Potassium.

℞. Carbonate of potassium, half an ounce.
Vinegar of squill, twelve fl. ounces.

Evaporate to the consistence of honey, and add

Alcohol (.842), six fl. ounces.

Decant, after digesting for a few days. Dose, forty to sixty drops, in some demulcent fluid, in dropsy and asthma. *Keup.*

Bolus of Acetate of Potassium.

℞. Acetate of potassium, one scruple.
Conserve of pot marigold, sufficient.

Mix. To be taken in the morning, for some days, to retard the secretion of milk. *St. Marie.*

Compound Pills of Acetate of Potassium.

℞. Acetate of potassium, Ammoniac, Pills of aloes and myrrh, each, one part.
Soap, two parts.
Simple syrup, sufficient.

Mix, and make pills of five grains. *Van Mons.*

Conserve with Acetate of Potassium.

℞. Acetate of potassium, half an ounce.
Sulphate of sodium, one drachm.
Juice of scurvy grass, " fumitory, " dandelion, each, two ounces.
Sugar, sufficient.

Mix, and form conserve. A teaspoonful, two or three times a day, in obstructions of the bowels. *Bories.*

℞. Acetate of potassium,
Powdered burnt sponge, each, two drachms.
Calomel, twelve grains.
Sulphuret of antimony, one drachm and a half.
Jalap, sixteen grains.
Sulphur, one drachm.
Simple syrup, sufficient.

Mix. Dose, twelve to twenty-four grains, twice a day, in scrofula. *Baumes.*

Liquid Acetate of Potassium.

℞. Acetic acid, one hundred parts.
Bicarbonate of potassium, sufficient.

Neutralize the acid and add enough distilled water to make the whole weight one hundred and forty-two parts. Its sp. gr. is 1.176, and three parts of it correspond to one part of dry acetate. *Ph. Germ.*

℞. Acetate of potassium, one part.
Distilled water, two parts.

Dissolve. *Amster. Ph.*

Dose, forty to eighty drops, in an appropriate vehicle, as a diuretic.

Mixture of Liquid Acetate of Potassium.

℞. Liquid acetate of potassium, two ounces.
Extract of Peruvian bark, two drachms.
" cascarilla, one drachm.
Tincture of aloes and myrrh, one ounce.

Mix. In intermittent fevers, complicated with obstruction and dropsy; in doses of thirty drops, every two hours during the apyrexia. *Bories.*

℞. Liquid acetate of potassium, four ounces.
Extract of centaury, two drachms.

Sulphuric ether, twenty drops.
Syrup of kermes, two ounces.

Mix. In dropsy and obstructions. In doses of thirty drops. *Saunders.*

Tincture of Acetate of Potassium.

℞. Acetate of potassium, two ounces.
Alcohol, four fl. ounces.

Digest for some days, and filter. Dose, thirty to sixty drops. *Bruns. Ph.*

Mixture of Acetate of Potassium.

℞. Acetate of potassium, } each,
Extract of dandelion, } half an
" hemlock, } ounce.
Fennel water, six ounces.
Syrup of marsh mallow, one ounce.

Mix. Two teaspoonfuls, every four hours, in jaundice. *Quarin.*

℞. Carbonate of potassium, fifteen grains.
Distilled vinegar, sufficient

to dissolve; add to the solution

Water, half an ounce.
Mint water, one ounce.
Pimento water,
Vinegar of squill, each, one drachm.
Simple syrup, three drachms.

Mix. Dose, half a drachm to a drachm, every six hours, in dropsy. *Milman.*

℞. Arnica root, one drachm.
Boiling water, sufficient

to obtain four ounces of infusion; add

Carbonate of potassium, saturated with vinegar of squill, half a drachm.
Syrup of orange flowers, half an ounce.

Mix. A spoonful every two hours in dropsy. *Wendt.*

℞. Acetate of potassium,
Oxymel of squill, each, one drachm.
Linden water, four drachms.
Wine of opium, fifteen drops.
Syrup of marsh mallow, one ounce.

Mix. In spoonful doses, as a diuretic and sedative. *Pierquin.*

POTASSII ARSENITIS LIQUOR.

ARSENICAL, OR FOWLER'S SOLUTION.

℞. Arsenious acid, in small fragments,
Bicarbonate of potassium, each, sixty-four grains.
Distilled water, sufficient.
Compound spirit of lavender, half a fl. ounce.

Boil the arsenious acid and bicarbonate of potassium with half a fl. ounce of the water, till the acid is entirely dissolved, add twelve fl. ounces of water, then the spirit of lavender, and afterwards, sufficient distilled water to make it measure a pint. *U. S. Ph.*

Fowler's solution of *Paris Codex* contains, in one hundred parts, that of *Ph. Germ.* in ninety parts, of the liquid, one part of arsenious acid.

Used in the same cases as arsenious acid, especially in intermittent fever. Each fl. drachm contains half a grain of arsenious acid. Dose, about ten drops, two or three times a day.

Mixture of Fowler's Solution.

℞. Fowler's solution, sixty drops.
Laudanum, thirty drops.
Compound spirit of lavender, one fl. drachm.
Cinnamon water, four fl. ounces.

Mix. Dose, a tablespoonful for an adult, a teaspoonful for a child, every two or three hours. When given in this form, Fowler's solution is less apt to disagree with the stomach than if administered in the undiluted state. *Ellis.*

Mixture of Iodine and Arsenic.

℞. Lugol's solution, two fl. drachms.
Fowler's solution, one fl. ounce.

Mix. Dose, five drops, three times daily. *Ellis.*

POTASSII ARSENIAS.

ARSENIATE OF POTASSIUM.

℞. White arsenic,
Nitre, each, one ounce.

Pulverize separately, mix, and introduce into an earthenware retort; heat to redness, as long as nitrous fumes are evolved; let cool, dissolve the residuum in four pints of boiling distilled water, evaporate, and crystallize. *Dub. Ph.* 1806.

Dose, one-sixteenth to one-eighth of a grain.

Mixture of Arseniate of Potassium.

℞. Arseniate of potassium, one-fifth of a grain.
Mint water, three ounces.
Simple syrup, half an ounce.

Mix. In spoonful doses, in the apyrexia of intermittents. *Foy.*

POTASSII BICARBONAS.

BICARBONATE OF POTASSIUM.

℞. Carbonate of potassium, forty-eight troyounces.
Distilled water, ten pints.

Dissolve the carbonate in the water, and pass carbonic acid through the solution till it is fully saturated. Then filter and evaporate, that crystals may form, taking care that the heat does not exceed 160° F. Pour off the supernatant liquor, and dry the crystals on bibulous paper. Carbonic acid is obtained from marble, by the addition of dilute sulphuric acid. *U. S. Ph.*

Properties are the same as those of the carbonate, but it generally agrees better with the stomach. Dose, twenty grains to half a drachm.

Effervescing Powders of Bicarbonate of Potassium.

℞. Bicarbonate of potassium, six hundred and forty grains.

Divide into sixteen powders.

℞. Tartaric acid, one ounce.

Divide into sixteen powders.

Keep the acid and alkaline powders in papers of different colors. *Ed. Ph.*

Usually made with the bicarbonate of sodium.

Effervescing Solution of Bicarbonate of Potassium.

℞. Bicarbonate of potassium, thirty grains.
Distilled water, one pint (imp.).

Dissolve, and pass washed carbonic acid into the solution to give a pressure of seven atmospheres; keep in a well-stopped vessel. *Brit. Ph.*

℞. Bicarbonate of potassium, twenty grains.
Mineral water (of the shops), half a pint.

Mix, and drink in a state of effervescence. *Pereira.*

Mixture of Bicarbonate of Potassium.

℞. Bicarbonate of potassium, ten to fifteen grains.
Seltzer water, six fl. ounces.

Dissolve. To be taken three or four times a day, as an antilithic. *Ellis.*

℞. Bicarbonate of potassium, one drachm.
Mint water, six fl. ounces.

Dissolve. A spoonful every hour—has been recommended in cholera. *Ammon.*

POTASSII BISULPHAS.

BISULPHATE OF POTASSIUM.

℞. Salt remaining after distillation of nitric acid, two pounds.
Sulphuric acid, one pound.
Boiling water, (imp.) six pints.

Dissolve the salt in the water, add the acid, and mix. Boil down the solution, and set aside, that crystals may form. *Lond. Ph.* 1836.

Aperient and tonic, in doses of one to two drachms, properly diluted.

Effervescing Draught of Bisulphate of Potassium.

℞. Bisulphate of potassa,
Carbonate of soda, each, one drachm.

Dissolve separately, in two fl. ounces of water, each; mix, and take whilst effervescing. *Barker.*

Disinfecting Powder.

℞. Acid sulphate of potassium, four hundred and ten parts.
Subacetate of lead, seventy parts.
Manganese, thirty parts.

Reduce these, separately, to fine powder, and when wanted, mix in a proper vessel. *Keist.*

POTASSII BITARTRAS.

BITARTRATE OF POTASSIUM.
CREAM OF TARTAR.

This is cathartic, diuretic, and cooling. The dose is from one to two drachms, as an aperient; and from half an ounce to one ounce, as a hydragogue purgative.

Dentifrice of Bitartrate of Potassium.

℞. Bitartrate of potassium, five troyounces.
Burned alum, two drachms and a half.
Cochineal, powdered, two drachms.
Otto of roses, six drops.
Mix. *Charlard.*

℞. Bitartrate of potassium, six parts.
Powdered shell-lac, eight parts.
" cuttlefish bone,
" orris root,
each, eight parts.
" cloves, } each,
" myrrh, } two parts.
" mastich, }
Triturate well together. *Guibourt.*

℞. Bitartrate of potassium,
Rhatany, equal parts.
Orris root, sufficient
to give an agreeable odor. Triturate well together. *Ferrara Ph.*

Powder of Bitartrate of Potassium.

℞. Bitartrate of potassium, three ounces.
Nitrate of potassium, three drachms.
Sugar, four ounces.
Mix. Dose, one to two drachms, in whey, as a laxative. *St. Marie.*

℞. Bitartrate of potassium, ninety grains.
Powdered squill, two grains.
" digitalis, one grain.
" ginger, five grains.
Mix. Make a powder, to be taken every eight hours. In ascites and anasarca. *A. T. Thomson.*

℞. Bitartrate of potassium, thirty grains.
Powdered squill, two grains.
" ginger, four grains.
Mix. Make a powder, to be taken every eight hours. Useful in ascites. *A. T. Thomson.*

℞. Bitartrate of potassium, six drachms.
Powdered jalap, one drachm.
Mix, and divide into six powders. Give one powder every three hours, in dropsical cases requiring purging. *Chapman.*

Electuary of Bitartrate of Potassium.

℞. Bitartrate of potassium, one ounce.
Powdered ginger,
Conserve of roses,
each, one drachm.
Syrup of orange-peel, sufficient.
Mix. To be taken in spoonful doses, as a hydragogue purgative. *Monro.*

Oxymel of Bitartrate of Potassium.

℞. Bitartrate of potassium, one part.
Clarified honey, two parts.
Mix. As a purgative in bilious fever and dropsies. *Swediaur.*

Solution of Bitartrate of Potassium.

℞. Bitartrate of potassium, one ounce.
Water, two pints.
Dissolve. To be taken freely during the day, as a diuretic. *Ellis.*

Compound Solution of Bitartrate of Potassium.

℞. Bitartrate of potassium, two drachms.
Manna, two ounces.
Water, eight ounces.
Lemon juice, half an ounce.
Mix, and clarify with the white of an egg; infuse a small quantity of orange-peel in the fluid, and strain on cooling. A pleasant laxative. *Taddei.*

Mixture of Bitartrate of Potassium.

℞. Bitartrate of potassium, two scruples.
Antimonial wine,
Vinegar of squill,
each, half a drachm.
Parsley water, one ounce and a half.
Syrup of seneka, six drachms.
Mix. A teaspoonful every two hours, in dropsy supervening on scarlatina. *Vogt.*

℞. Bitartrate of potassium, half an ounce.
Barley water, two pounds.
Dissolve, and add
Brandy, one to two ounces.
Much praised as a diuretic in dropsies. *Milman.*

R. Bitartrate of potassium, one ounce.
Borax, two drachms.
Boiling water, sufficient
to dissolve. To ten ounces of the cooled solution add
Nitrate of potassium, two drachms.
Oxymel, two ounces.
Mix. *Beasley.*

R. Bitartrate of potassium,
Extract of horehound, each, two drachms.
Balm water, three ounces.
Mix. One-half to be taken morning and evening, in hemorrhoids, with constipation. *Augustin.*

Imperial Drink.

R. Bitartrate of potassium, half an ounce.
Lemon, cut into slices, one.
White sugar, half a pound.
Water, three pints.
Mix. Let stand for half an hour, and strain. A pleasant, cooling drink. *Gray.*

POTASSII BORAS.

BORATE OF POTASSIUM.

R. Boracic acid, six parts.
Bicarbonate of potassium, five parts.
Mix, and heat to redness in a crucible, dissolve the residuum in water, filter, and evaporate to dryness. Dose, a few grains, in calculous disorders. *Beasley.*

POTASSII BORO-TARTRAS.

BORO-TARTRATE OF POTASSIUM.

R. Powdered bitartrate of potassium, four ounces.
Boracic acid, one ounce.
Water, three pints.
Mix, and put in a silver basin, and boil till most of the water is evaporated, and continue the evaporation by a gentle heat, constantly stirring. When the matter has become thick, take it up in portions, flatten them, and dry in a stove; reduce them to powder, and keep in well-closed bottles. *Paris Codex.*

R. Borax, two parts.
Boiling water, twenty parts.
Dissolve, and digest with
Purified cream of tartar, five parts.
Filter and evaporate on a vapor-bath until it becomes a tenacious mass; place on paper, dry by a gentle heat, and rub to powder. *Ph. Germ.*

This is known as *soluble cream of tartar.* It is purgative in about the same dose as cream of tartar. That made with borax is deliquescent.

Powder of Boro-tartrate of Potassium.

R. Cream of tartar, one ounce.
Borax, three drachms.
Sugar, two ounces.
Mix, and divide into three powders; one to be taken, in a glass of water, every half hour. *Pierquin.*

Compound Pills of Boro-tartrate of Potassium.

R. Boro-tartrate of potassium, one drachm and a half.
Extract of buckbean, two ounces.
Seneka snakeroot, two drachms.
Colchicum, one drachm and a half.
Mix, and make pills of two grains. Dose, six to twelve every two hours, as a hydragogue purgative. *Augustin.*

Solution of Boro-tartrate of Potassium.

R. Boro-tartrate of potassium, five drachms.
Sugar, twenty drachms.
Boiling water, twenty-seven troyounces.
Dissolve. A laxative drink. *Paris Codex.*

Mixture of Boro-tartrate of Potassium.

R. Boro-tartrate of potassium, one ounce.
Mint water, eight ounces.
Spirit of nitrous ether, two drachms.
Oxymel of squill, one ounce.
Mix. Two spoonfuls every two hours, as a diuretic. *Selig.*

R. Boro-tartrate of potassium, half an ounce.
Tartar emetic, one grain.
Water, four ounces.

Mix. In spoonful doses, in congestion of the head. *Radius.*

Boro-tartrate of Potassium and Magnesium.

℞ Boro-tartrate of potassium, one part.
Carbonate of magnesium, one-fourth part.
Water, six parts.

Dissolve the boro-tartrate in the water, saturate with the magnesia, evaporate carefully, till reduced to a tenacious paste, which divide into small masses, and dry in a stove. *Mailliere Renault.*

Mixture of Boro-tartrate of Potassium and Magnesium.

℞ Boro-tartrate of potassium and magnesium, thirty parts.
Citric acid, two parts.
Syrup of lemon, sixty parts.
Warm water, three hundred parts.

Dissolve. *Mailliere Renault.*

POTASSII BROMIDUM.

BROMIDE OF POTASSIUM.

℞ Bromine, two ounces.
Iron filings, one ounce.
Carbonate of potassium, two ounces and one drachm.
Distilled water, four pints.

To a pint and a half of the water, first add the iron and then the bromine. Set them aside for half an hour, occasionally stirring. Apply a gentle heat, and when the liquid becomes greenish, add the carbonate of potassium dissolved in a pint and a half of the water. Strain, and wash what remains in a pint of boiling distilled water, and again strain. Evaporate the mixed liquors to crystallization. *U. S. Ph.*

Stimulant, anaphrodisiac, antispasmodic, sedative, and soporific; used in diseases of the nervous system in doses of five to thirty grains; also as an alterative and resolvent, both externally and internally, in bronchocele and scrofula, in doses of two to ten grains three times a day.

Solution of Bromide of Potassium.

℞ Bromide of potassium, twelve grains.
Lettuce water, three ounces.
Syrup of marsh mallow, one ounce.

Mix. To be given in tablespoonful doses, in the twenty-four hours, in scrofula. *Foy.*

℞ Bromide of potassium, two drachms.
Syrup of orange-peel, one fl. ounce.
Water, three fl. ounces.

Mix. Dose, a dessertspoonful thrice daily in epileptiform convulsions and hysteria. *Waring.*

℞ Bromide of potassium, two drachms.
Cinnamon water, one fl. ounce.

Dissolve. A dessertspoonful in the evening, to be repeated at bedtime, in insomnia. *Brown-Séquard.*

Ointment of Bromide of Potassium.

℞ Bromide of potassium, thirty-four grains.
Lard, one ounce.

Mix. In frictions on scrofulous swellings, and to tinea and tetter. *Magendie.*

Compound Ointment of Bromide of Potassium.

℞ Bromide of potassium, twenty-four grains.
Liquid bromine, six to twelve drops.
Lard, one ounce.

Mix. *Magendie.*

POTASSII BICHROMAS.

BICHROMATE OF POTASSIUM.

Large crystals having a deep orange-red color, and a strongly acrid and metallic taste. It is not used medicinally, but is employed in preparing chromic acid and for oxidizing amylic alcohol to valerianic acid. It acts as an escharotic.

POTASSII CARBONAS.

CARBONATE OF POTASSIUM.

℞ Impure carbonate of potassium, thirty-six troyounces.
Water, two pints and a half.

Dissolve the impure carbonate in the water, filter, pour into a clean iron vessel, and evaporate over a gentle fire till the solution thickens; then remove from the fire, and stir constantly, with an iron spatula, till the salt granulates. *U. S. Ph.*

Used as an antacid, and diuretic, etc. Dose, from five to twenty grains.

Pure Carbonate of Potassium.

℞. Bitartrate of potassium, two pounds.
Nitrate of potassium, one pound.

Rub them separately into powder, mix, and throw the mixture into a brass vessel, heated nearly to redness, that they may undergo combustion; from the residue prepare the pure carbonate as directed for the carbonate. *U. S. Ph.* 1840.

℞. Bicarbonate of potassium, one pound.

Put it in an iron crucible, heat gradually to redness for half an hour; when cold, remove the carbonate, dissolve in distilled water, filter, and evaporate to dryness in an iron vessel. *U. S. Ph.* 1870.

Solution of Carbonate of Potassium.

℞. Pure carbonate of potassium, eleven parts.
Distilled water, twenty parts.

Dissolve, and filter. *Ph. Germ.*

This is the *alkaline lotion* of *Paris Codex*. Dose, ten minims to a fl. drachm, properly diluted.

Powder of Carbonate of Potassium.

℞. Carbonate of potassium, ten grains.
Powdered chamomile,
" myrrh, each, twenty-four grains.

Mix. To be taken every hour, in the apyrexia of intermittents. *Foy.*

℞. Carbonate of potassium, one part.
Powdered gum Arabic, eight parts.

Triturate together for a long time. Dose, half a drachm to a drachm, dissolved in water, in engorgement of the bowels. *Guibourt.*

Collyrium of Carbonate of Potassium.

℞. Carbonate of potassium, two to six grains.
Water, one ounce.

Mix. To be dropped in the eye every two to four hours, in specks on the cornea. *Himley.*

℞. Carbonate of potassium, twenty-five grains.
Veal broth, filtered,
Celandine water, each, two ounces.

Digest for twenty-five hours on a sand-bath, filter, and add

Tincture of aloes, twenty-four drops.

In specks on the cornea. *Bories.*

Tincture of Carbonate of Potassium.

℞. Carbonate of potassium, one part.

Calcine it with a strong heat in a crucible for two hours, pour it in a heated mortar, pulverize it rapidly, and pour on the hot powder,

Alcohol, four parts.

Digest for fifteen days in a stove, often agitating, and filter. *Guibourt.*

This is a weak alcoholic solution of caustic potassa.

Collutory of Carbonate of Potassium.

℞. Alcohol, four ounces.
Essence of mint, twenty drops.
" roses, eight drops.
Cochineal,
Carbonate of potassium, each, ten grains.

Macerate for twenty-four hours, and filter. Much esteemed as a mouth wash and gargle, under the name of *Oriental Water*. A teaspoonful is to be used, mixed with a glass of water. *Delabarre.*

Emulsion with Carbonate of Potassium.

℞. Carbonate of potassium, one scruple.
Yolk of egg, three drachms.
Mucilage, one drachm.
Oil of almonds,
Cherry water, each, one ounce.
Linden water, two ounces.

Mix. A teaspoonful every hour, in the colic of children. *Rosenstein.*

Fomentation with Carbonate of Potassium.

℞. Carbonate of potassium,
Soap, each, one ounce.
Elder water, two pounds.

Dissolve, filter, and add

Sal ammoniac, two drachms.

As an application to bruises, etc. *Cadet.*

Liniment with Carbonate of Potassium.

℞. Solution of carbonate of potassium, two ounces.
Olive oil, four ounces

Yolks of eggs, two.
Mix. As an application to chaps. *Plenck.*

Lotion of Carbonate of Potassium.

℞. Carbonate of potassium, three drachms.
Water, four ounces.
In pruritus vaginæ. *Trousseau.*

℞. Carbonate of potassium, one ounce.
Rose water, one pound.
Dissolve, and filter. As an application to chilblains. *Brugnatelli.*

℞. Carbonate of potassium, three drachms.
Common salt, two drachms.
Rose water, eight ounces.
Orange-flower water, two ounces.
Mix. As a lotion in sunburn and tan. *Sundelin.*

Mixture of Carbonate of Potassium.

℞. Carbonate of potassium, two drachms.
Antimonial wine, one fl. drachm.
Laudanum, forty drops.
Compound spirit of lavender, two fl. drachms.
Distilled water, four fl. ounces.
Mix. A tablespoonful, every hour or two, as an expectorant. *Ellis.*

℞. Carbonate of potassium, one scruple.
Lemon juice, four fl. drachms.
Cinnamon water, seven fl. drachms.
Wine of ipecacuanha, fifteen to twenty drops.
Mix. To be taken every three or four hours, as a diaphoretic. *Burke.*

℞. Carbonate of potassium, one scruple.
Powdered gum Arabic, half a drachm.
Oil of mint, two drops.
Laudanum, ten drops.
Water, three ounces.
Mix. A tablespoonful for a dose, as may be required, in sickness of the stomach. *Ellis.*

℞. Carbonate of potassium, one drachm.
Peppermint water, four ounces.
Hoffmann's anodyne, two scruples.
Simple syrup, half an ounce.
Mix. Dose, a tablespoonful in asthma, with acidity of the stomach. *Augustin.*

℞. Carbonate of potassium,
White sugar, each, one drachm.
Compound spirit of lavender, two fl. drachms.
Laudanum, forty drops.
Mint water, four fl. ounces.
Mix. A tablespoonful, every hour or two, in sickness of the stomach, with acidity. *Ellis.*

℞. Aromatic spirit of ammonia, one fl. drachm.
Carbonate of potassium, two drachms.
Cinnamon water, four fl. ounces.
Mix. A teaspoonful occasionally, in pyrosis. *Ellis.*

℞. Carbonate of potassium, Ipecacuanha, Calomel, each, one drachm and a half.
Water, two pints.
Boil down to one-half in an earthen vessel. Two spoonfuls a day, in a quart of infusion of sarsaparilla. *St. Marie.*

℞. Carbonate of potassium, one drachm.
Elder-flower water, six ounces.
Syrup of marsh mallow, one ounce.
Mix. A spoonful every hour, in angina accompanied with aphtha, in catarrhal fevers. *Radius.*

℞. Carbonate of potassium, one scruple.
Cochineal, half a drachm.
Hyssop water, four ounces.
Syrup of poppies, " tolu, each, half an ounce.
Orange-flower water,
Syrup of ipecacuanha, each, one ounce.
Mix. A spoonful, every two hours, in hooping-cough. *Bories.*

Compound Tincture of Carbonate of Potassium.

℞. Carbonate of potassium,
Cinnamon water, each, one pound.
Opium, two ounces.

Vinous cinnamon water, four ounces.

Digest in a water-bath for three weeks, often agitating; and add to the filtered solution,

Gum Arabic, two ounces.
Carbonate of ammonium, one ounce.
Cinnamon water, six ounces.

In syphilis. *Niemann.*

Ointment of Carbonate of Potassium.

℞. Carbonate of potassium, one ounce.
Sulphur, two ounces.
Lard, four ounces.

Mix. As a friction in itch. *Brera.*

POTASSII CHLORIDUM.

Chloride of Potassium.

℞. Carbonate of potassium, at will.

Dissolve in a sufficient quantity of water, filter, and add muriatic acid to saturation; concentrate the solution by evaporation, and cool slowly, that crystals may form. *Guibourt.*

Formerly known as the *Salt of Sylvius*, and used in fever to excite perspiration, and as a diuretic, in doses of from one to two scruples.

POTASSII CHLORAS.

Chlorate of Potassium.

℞. Carbonate of potassium, two parts.
Quicklime, one part.

Mix, and expose to a current of chlorine gas. When saturated, heat the mixture gently, digest it in water, and separate the chlorate from the filtered liquid by crystallization. *Graham.*

℞. Caustic potassa, one part.
Water, sufficient

to form a solution of sp. gr. 1.110.

Lime, five and a half parts.

Mix, and heat to temperature of 122° F.; then pass chlorine through the mixture to saturation. Evaporate nearly to dryness, dissolve in boiling water, filter, and crystallize. *F. C. Calvert.*

Has been used in scurvy, chronic hepatitis, syphilis, etc., in doses of fifteen to twenty grains.

Powder of Chlorate of Potassium.

℞. Chlorate of potassium, six to eight grains.
Sugar, one scruple.

Mix. To be given two to four times a day, in phthisis, to diminish the febrile state. *Radius.*

Stevens's Saline Powder.

℞. Chlorate of potassium, seven grains.
Chloride of sodium, one scruple.
Bicarbonate of sodium, half a drachm.

Mix. For a dose. *Stevens.*

Recommended in cholera.

Solution of Chlorate of Potassium.

℞. Chlorate of potassium, one drachm.
Distilled water, twelve fl. ounces.

Dissolve. *Copland.*

As a lotion to indolent ulcers.

℞. Chlorate of potassium, half a drachm.
Syrup, two and a half drachms.
Water, twelve and a half drachms.

Mix. To be given in the course of the day, in tablespoonful doses, in cancrum oris. *H. Hunt.*

℞. Chlorate of potassium, one drachm and a half.
Distilled water, five fl. ounces.

Dissolve. A tablespoonful, every two hours, in obstinate rheumatism, tic-douloureux, etc. *Knod.*

Lozenges of Chlorate of Potassium.

℞. Chlorate of potassium, in fine powder, five troyounces.
Sugar, in fine powder, eighteen troyounces.
Tragacanth, in fine powder, two troyounces.
Vanilla, thirty grains.

Rub the vanilla with some of the sugar to a uniform powder, mix thoroughly with the other powders, avoiding pressure, add water to form a mass, and divide into four hundred and eighty troches. *U. S. Ph.*

Each lozenge contains five grains of the chlorate. Dose, one to six.

The lozenges of *Brit. Ph.* are nearly identical with the above. Those of *Paris Codex* contain one grain and a half of chlorate.

Gargle of Chlorate of Potassium.

℞. Chlorate of potassium, one part.
Distilled water, twenty-five parts.
Syrup of mulberries, five parts.

Dissolve, and mix. *Paris Codex.*

Injection of Chlorate of Potassium.

℞. Chlorate of potassium, one drachm.
Water, eight fl. ounces.

Dissolve. In leucorrhœa and ulceration of the os uteri; also in gonorrhœa. *B. Brown.*

POTASSII CITRAS.

Citrate of Potassium.

℞. Citric acid, ten troyounces.
Bicarbonate of potassium, fourteen troyounces.
Water, sufficient.

Dissolve the acid in a pint of water, and gradually add the bicarbonate; when effervescence ceases, filter the solution, if necessary, through paper, and evaporate to dryness, observing to stir constantly as soon as the salt begins to granulate. Then rub it in a mortar, pass it through a coarse sieve, and put it in bottles, which must be closely stopped. *U. S. Ph.*

Effervescing Draught.

℞. Carbonate of potassium, two drachms.
Distilled water, four fl. ounces.

Dissolve.

℞. Fresh lemon juice,
Distilled water, each, two fl. ounces.

Mix. Add two tablespoonfuls of the diluted lemon juice, to one of the alkaline solution, and let the mixture be taken in a state of effervescence.

An excellent diaphoretic. *Ellis.*

Solution of Citrate of Potassium.

℞. Citric acid, half a troyounce.
Water, half a pint.
Bicarbonate of potassium, three hundred and thirty grains.

Dissolve, and strain. *U. S. Ph.*

This neutral mixture is used where fresh lemon juice cannot be procured; it is as efficacious, but is not as agreeable.

℞. Citrate of potassium, three drms.
Distilled water, four fl. ounces.
Oil of lemon, two drops.
White sugar, two drachms.

Mix. A tablespoonful to be taken every two hours. In same cases as the neutral mixture. *Ellis.*

Mixture of Citrate of Potassium. (Neutral Mixture.)

℞. Fresh lemon juice, half a pint.
Bicarbonate of potassium, sufficient.

Neutralize the juice with the bicarbonate, and strain. *U. S. Ph.*

Compound Neutral Mixture.

℞. Lemon juice, one fl. ounce.
Carbonate of potassium, sufficient to saturate; add
Mint water, seven fl. ounces.
Tartar emetic, one grain.
Syrup, half an ounce.

Mix. *Lisbon Ph.*

Mixture of Citrate of Potassium and Peruvian Bark.

℞. Lemon juice, one fl. ounce and a half.
Carbonate of potassium, one drachm.
Tincture of Peruvian bark, one fl. ounce.
Cinnamon water, three fl. ounces.

Mix. A tablespoonful every two hours. To promote insensible perspiration while taking bark. *Ellis.*

POTASSII CYANIDUM

Cyanide of Potassium.

℞. Ferrocyanide of potassium, dried, eight ounces.
Carbonate of potassium, dried, three ounces.

Mix the salts and throw the mixture into a deep iron crucible, heated to redness; keep up the temperature till effervescence ceases, and the fused mass concretes of a white color upon a warm glass rod dipped into it. Then pour the liquid carefully into a shallow dish to solidify, stopping before the salt becomes contaminated with the precipitated iron. Break up the mass while yet warm, and preserve it in well-stopped bottles. *U. S. Ph.*

Dose, one-eighth of a grain.

℞. Ferrocyanide of potassium, dried, eight ounces.
Pure carbonate of potassium, three ounces.
Charcoal, in fine powder, one ounce.

Mix well, fuse in an iron vessel until effervescence ceases, and the fusion is tranquil; pour out the fused mass on an iron plate, and cool. Powder when cool, dissolve in alcohol (.900), and separate and dry the crystals which form on cooling, and preserve them in well-closed bottles. *Wöhler.*

Pills of Cyanide of Potassium.

℞. Cyanide of potassium,
Starch mixed with syrup of gum, each, half a grain.

Mix, and make two pills. Dose, one, morning and evening. In spasmodic affections of the chest. *Foy.*

Solution of Cyanide of Potassium.

℞. Cyanide of potassium, twenty-two grains.
Diluted alcohol, nine fl. drachms.

Dissolve. Equal to hydrocyanic acid. *Laming.*

Mixture of Cyanide of Potassium.

℞. Cyanide of potassium, seven grains and a half.
Distilled water, one pint.
Sugar, one ounce and a half.

Mix. A tablespoonful, night and morning, in pectoral affections. *Magendie.*

℞. Cyanide of potassium, four grains.
Distilled water, two ounces.
Syrup, three drachms.

Mix. A teaspoonful, every three or four hours, in asthma and chronic catarrh. *Cadet.*

℞. Tincture of castor, } each,
Musk, } four
Nitrate of potassium, } grains.
Cyanide of potassium, two grains.
Linden-flower water, eight fl. ounces.

Mix. To be taken in divided doses, in twenty-four hours, in chorea. *Fouquier.*

Syrup of Cyanide of Potassium.

℞. Cyanide of potassium, seven grains and a half.
Simple syrup, one pound.

Mix. *Magendie.*

Lotion of Cyanide of Potassium.

℞. Cyanide of potassium, one to four grains.
Distilled water, one ounce.

Mix. *Foy.*

℞. Cyanide of potassium, eight grains.
Distilled water, one ounce.

Mix. To be applied by means of compresses, in cases of neuralgia, articular rheumatism, etc. *Foy.*

℞. Cyanide of potassium, ten grains.
Emulsion of bitter almonds, six ounces.

Mix. As an application to chronic eruptions attended with much itching. *Cazenave.*

Ointment of Cyanide of Potassium.

℞. Cyanide of potassium, one to four grains.
Lard, one ounce.

Mix. *Lombard.*

℞. Cyanide of potassium, twelve grains.
Oil of almonds, two drachms.
Cold cream, two ounces.

Mix. To be rubbed on the skin to relieve neuralgic pains. *Cazenave.*

POTASSII ET AMMONII CARBONAS.

Carbonate of Potassium and Ammonium.

℞. Carbonate of potassium, four parts.
" ammonium, one part.
Water, sufficient

to dissolve the two salts. Pass a current of carbonic acid through the solution to saturation, heat gently, and let crystallize.

In doses of half a drachm, in half an ounce of mint water, four times a day, in diabetes, dyspepsia, gravel, etc. *Swediaur.*

POTASSII ET AMMONII SULPHAS.

Sulphate of Potassium and Ammonium.

℞. Bisulphate of potassium, one part.
Boiling water, two parts.

Dissolve, and add

Solution of ammonia, sufficient

to saturate, and crystallize. *Van Mons.*

POTASSII ET AMMONII TARTRAS.

TARTRATE OF POTASSIUM AND AMMONIUM.

℞. Bitartrate of potassium, one pound.
Boiling water, sufficient

to dissolve; add gradually

Solution of ammonia, sufficient

to saturate the excess of the acid; filter, and evaporate, so that crystals may form. *Hamb. Ph.*

Solution of Tartrate of Potassium and Ammonium.

℞. Solution of carbonate of ammonium, six ounces.

Add, gradually,

Bitartrate of potassium, sufficient

to saturate; let stand for some hours, and filter. Diuretic, in doses of a drachm.

Mixture of Tartrate of Potassium and Ammonium.

℞. Tartrate of potassium and ammonium, half an ounce.
Fennel water, six fl. ounces.
Extract of dandelion,
Clarified honey, each, one ounce.

Mix. A spoonful every hour, as a diuretic. *Phœbus.*

POTASSII ET MAGNESII SULPHAS.

SULPHATE OF POTASSIUM AND MAGNESIUM.

℞. Sulphate of potassium, three and a half parts.
Sulphate of magnesium, ten parts.
Boiling water, sufficient.

Filter, and crystallize.

POTASSII ET SODII TARTRAS.

TARTARIZED SODA.—ROCHELLE SALT.

℞. Carbonate of sodium, twelve troyounces.
Cream of tartar, sixteen troyounces.
Boiling water, five pints.

Dissolve the carbonate in the water, and add gradually the cream of tartar; filter, evaporate to a pellicle, and set aside to crystallize. Decant, and dry crystals on bibulous paper. *U. S. Ph.*

Mild purgative in doses of half an ounce to an ounce.

Powder of Tartarized Soda and Rhubarb.

℞. Tartarized soda, ten grains.
Powdered rhubarb, three to seven grains.

Mix. To be taken every morning for two weeks, in enlargement of the mesentery, in children. *Fordyce.*

Aperient Effervescing Powders. (Seidlitz Powders.)

℞. Tartarized soda, three troyounces.
Bicarbonate of sodium, one troyounce.

Mix thoroughly, and divide into twelve equal parts.

Powdered tartaric acid, seven drachms.

Divide into twelve equal parts, and keep these in papers colored differently from those of the preceding powders. *U. S. Ph.*

For use, dissolve one of each kind of powders in some water, mix the solution, and take during effervescence.

Mixture of Tartarized Soda.

℞. Tartarized soda, half an ounce.
Sulphate of potassium, two drachms.
Infusion of succory, one pint.
Oxymel of squill, four fl. ounces.

Mix. Four spoonfuls, in the morning, with an hour's interval. In visceral obstructions. *St. Marie.*

℞. Tartarized soda, one ounce.
Extract of henbane, six grains.
Syrup of chamomile, one fl. ounce.
Water, six fl. ounces.

Mix. A spoonful every hour, in constipation. *Phœbus.*

Whey with Tartarized Soda.

℞. Root and leaves of dandelion, Fumitory, Water-cress, Chervil, each, a handful.
Clarified whey, four pints.

Boil for five minutes, express, strain, and add

Tartarized soda, two drachms.
Honey, six drachms.

To be taken every morning, early, in four doses, with the interval of an hour. Much praised in visceral obstructions.

St. Marie.

Clyster with Tartarized Soda.

℞ Tartarized soda,
Extract of dandelion,
each, five drachms.
Infusion of elder flowers,
five fl. ounces.

Dissolve. *Radius.*

POTASSII IODAS.

Iodate of Potassium.

℞ Iodine, at will.
Caustic potassa, sufficient.

Dissolve the iodine in the alkali till the solution begins to become colored. Evaporate to dryness; treat the residue with alcohol, and preserve the residue. The alcohol takes up the iodide of potassium.

Ferarra Ph.

℞ Iodide of potassium, one part.

Fuse in a capacious crucible, and gradually add to the fused salt, after removing from the fire,

Chlorate of potassium,
one and a half parts.

Wash the mass with some warm water, which leaves the iodate undissolved.

Beasley.

Syrup of Iodate of Potassium.

℞ Iodate of potassium,
twenty grains.
Peppermint water, two drachms.
Simple syrup, ten ounces.

Mix. *Giordano.*

POTASSII IODIDUM.

Iodide of Potassium.

℞ Potassa, six troyounces.
Iodine, in powder,
sixteen troyounces.
Charcoal, in powder, two
troyounces.
Boiling distilled water, three pints.

Dissolve the potassa in the water, add the iodine gradually until in slight excess, stirring after each addition till the solution becomes colorless. Evaporate to dryness, stirring in the charcoal towards the close; rub to powder and heat to dull redness, maintaining the temperature for fifteen minutes. Cool, dissolve in water, filter, evaporate, and crystallize. The mother-liquor yields more crystals by evaporation.

U. S. Ph.

℞ Iodine, sixteen ounces.
Distilled water, eight pints.
Sulphuret of barium, sufficient.
Sulphate of potassium,
twelve ounces.

Mix the iodine with the water, and gradually add the powdered sulphuret, until the solution becomes colorless, constantly stirring. Heat to the boiling point, add the sulphate of potassium, boil for a quarter of an hour, and filter. Evaporate to crystallization. *Mohr.*

℞ Iodine, one hundred grains.
Carbonate of potassium,
seventy-five grains.
Water, two drachms.
Iron filings, thirty grains.

Mix, and heat slightly, then to redness; the resulting red powder is to be treated with water; filtered, and evaporated to dryness.

Pypues.

Dose, two to fifteen grains, but has been given in still larger quantities.

Pills of Iodide of Potassium.

℞ Iodide of potassium,
five drachms.
Distilled water, six drachms.
Crumb of bread, sufficient.

Mix, and make three hundred pills. In goitre, leucorrhœa, etc. *Pierquin.*

℞ Iodide of potassium, fifteen grs.
Burnt sponge,
Extract of bittersweet,
each, five drachms.
Distilled water, sufficient.

Mix, and make one hundred and eighty pills. Six, twice a day, in scrofula and goitre. *Vogt.*

Lozenges of Iodide of Potassium.

℞ Iodide of potassium, one drachm.
Sugar, three ounces.
Mucilage of tragacanth, sufficient.

Mix, and make lozenges of twelve grains. One to six or more a day. *Giordano.*

℞ Iodide of potassium,
seventy-five grains.
Powdered coffee, half a drachm.
" sugar, four ounces.

Mucilage of gum, made with a strong infusion of coffee, sufficient.

Mix, and make three hundred lozenges. Each contains a quarter of a grain of the iodide. In goitre, scrofula, etc. *Pierquin.*

Solution of Iodide of Potassium.

℞. Iodide of potassium, thirty-six grains.
Distilled water, one ounce.

Dissolve. Dose, ten minims. *Magendie.*

℞. Iodide of potassium, one drachm.
Distilled water, one ounce.

Dissolve. Fifteen drops, gradually increased, three times a day, in ovarian dropsy. *Elliotson.*

℞. Iodide of potassium, four ounces.
Distilled water, sufficient for eight fl. ounces.

Dissolve. Ten minims contain five grains of the iodide. *Guy's Hosp.*

Injection of Iodide of Potassium.

℞. Iodide of potassium, one to three grains.
Distilled water, one pint.

Dissolve. To stimulate fistulous sinuses in scrofulous patients. *Foy.*

Mixture of Iodide of Potassium.

℞. Iodide of potassium, one to four drachms.
Lettuce water, eight fl. ounces.
Mint water, two fl. drachms.
Syrup of marsh mallow, one fl. ounce.

Mix. *Foy.*

℞. Iodide of potassium, four drachms.
Lettuce water, eight fl. ounces.
Orange-flower water, one fl. drachm.
Tincture of foxglove, one to two fl. drachms.
Syrup of marsh mallow, one fl. ounce and a half.

Mix. *Magendie.*

In hypertrophy of the heart. A teaspoonful, morning and evening.

℞. Iodide of potassium, two drachms.
Distilled water, sixteen fl. ounces.
Syrup, two fl. ounces.

Mix. Two or three tablespoonfuls a day. *Cazenave.*

℞. Iodide of potassium, half a drachm.
Syrup of ginger, one fl. ounce.
Water, five fl. ounces.

Mix. Dose, a tablespoonful three times a day. *Ellis.*

℞. Quassia,
Gentian, each, one drachm.
Boiling water, sixteen fl. ounces.

Macerate for an hour, strain, and add

Iodide of potassium, thirty-six grains.
Carbonate of potassium, two drachms.

Mix. A tablespoonful three times a day. *Cumming.*

℞. Iodide of potassium, three grains.
Medicinal hydrocyanic acid, ten to twelve drops.
Lettuce water, four fl. ounces.
Syrup of marsh mallow, one fl. ounce.

Mix. A teaspoonful every hour, in phthisis. *Magendie.*

℞. Iodide of potassium, two grains.
Sulphate of magnesium, half an ounce.
Tartar emetic, half a grain.
Distilled water, six fl. ounces.

Mix. A teaspoonful three or four times a day, in scrofula. *Radius.*

Syrup of Iodide of Potassium.

℞. Iodide of potassium,
Water, each, twenty-five grains.
Simple syrup, two troyounces.

Dissolve. *Paris Codex.*

Syrup of Iodide of Iron and Potassium.

℞. Iodide of potassium, twenty grains.
Concentrated solution, containing iodide of iron, fifteen grains.
Orange-flower water, thirty grains.
Syrup, two troyounces.

Dissolve and mix. *Lahache.*

Iodide of Potassium and Sarsaparilla.

℞. Iodide of potassium, one drachm.
Decoction of sarsaparilla, two pints.
Syrup of orange-peel, two fl. ounces.

Mix. To be taken in glassfuls, during the day. *Magendie.*

Ointment of Iodide of Potassium.

℞. Iodide of potassium, in powder, one drachm.
Boiling water, half a fl. drachm.
Lard, seven drachms.

Dissolve the iodide in the water, and mix the solution with the lard. *U. S. Ph.*

The strength of this ointment may vary much, from containing a twenty-fourth of the salt, to an eighth or more, according as it may be required. In goitre, scrofulous swellings, etc.

℞. Iodide of potassium, sixty-four grains.
Carbonate of potassium, four grs.
Distilled water, one fl. drachm.
Prepared lard, one ounce.

Dissolve the salts and mix with lard. *Brit. Ph.*

℞. Iodide of potassium, twenty parts.
Hyposulphite of sodium, one part.
Distilled water, fifteen parts.
Lard, one hundred and sixty-five parts.

Dissolve the salts in the water, and mix with the lard. *Ph. Germ.*

The addition of a little potassa, carbonate of potassium, or hyposulphite of sodium prevents the liberation of iodine, and preserves the white color of the ointment.

℞. Spermaceti, half an ounce.
Olive oil, six drachms.
White wax, two drachms.
Iodide of potassium, four scruples.
Oil of lemon,
" roses, each, three drops.

Mix. This ointment does not change color by keeping. *Kallhofert.*

℞. Iodide of potassium,
Carbonate of sodium,
each, half a drachm.
Rose water ointment, six drachms.

Mix well. In chronic enlargement of the testicle. *Walthen.*

Ointment of Iodide of Potassium and Opium.

℞. Iodide of potassium, one drachm and a half.
Lard, one ounce and a half.
Laudanum, one fl. drachm.

Mix. *A. T. Thomson.*

℞. Iodide of potassium, half a drachm.
Extract of opium, ten grains.
Simple cerate, one ounce.

Mix. As a dressing to cancerous ulcers.

Ointment of Iodide of Potassium and Mercury.

℞. Iodide of potassium, twelve to twenty grains.
Mercurial ointment, half an ounce.

Mix. In various diseases of the skin. *Blarius.*

℞. Ointment of iodide of potassium, } each, two
Mercurial ointment, } ounces.
Oil of henbane,
" juniper, one drachm.

Mix. *Schonlein.*

When iodide of potassium and mercurial ointment are mixed, the globules soon appear; but if the iodide be artificially dried, previously, a uniform ointment is produced.

℞. Iodide of potassium, three parts.
Iodide of mercury,
Camphor, each, two parts.
Galen's cerate, thirty-two parts.

Mix. Used as a friction in acute hydrocephalus, in doses of half a drachm to a drachm. *Golfin.*

Ointment of Iodide of Potassium and Morphia.

℞. Iodide of potassium, fifteen grains.
Muriate of morphia, half a drachm.
Lard, ten ounces.

Mix. In painful tumors of the breasts, to be applied twice a day. *Chomel.*

Liniment of Iodide of Potassium.

℞. Hard soap, cut small,
Iodide of potassium,
each, one ounce and a half.
Glycerin, one fl. ounce.
Oil of lemon, one fl. drachm.
Distilled water, ten fl. ounces.

Dissolve the soap in seven ounces, and the glycerin and iodide in the remaining water, mix the solutions, and add the oil of lemon. *Brit. Ph.*

℞. Animal soap, one ounce and a half.
Alcohol, four fl. ounces.

Dissolve. Add solution of one ounce of iodide of potassium in four ounces of alcohol, aromatize with a few drops of oil of lavender, and pour into wide-mouthed bottles. *Boudet.*

℞. White soap, seven drachms.
Diluted alcohol, two fl. ounces.

Dissolve by a gentle heat, and whilst warm, add

Iodide of potassium, four drachms,

dissolved in

Diluted alcohol, four fl. drachms.
Beasley.

℞. Iodide of potassium, four drachms.
Diluted alcohol, two ounces.

Dissolve.

Curd soap, six drachms.
Diluted alcohol, two ounces.

Dissolve by a gentle heat, add the solution of iodide of potassium, and aromatize.
Foy.

These are used as liniments in goitre.

℞. White soap, ten drachms.
Oil of almonds, ten drachms.
Iodide of potassium, one drachm.
Water, one drachm.

Dissolve the iodide in the water, and add it to the soap and oil, melted together.
Guibourt.

Plaster of Iodide of Potassium.

℞. Iodide of potassium, one ounce.
Prepared frankincense, six ounces.
Wax, six drachms.
Olive oil, two fl. drachms.

Melt the frankincense and wax, add the iodide previously rubbed with the oil, and stir till cool. *Lond. Ph.*

Soap of Iodide of Potassium.

℞. Camphor, one drachm.
Tincture of benzoin, three drachms.

Add to the solution, triturating well,

Iodide of potassium, two drachms.
Goulard's extract, four drachms.

Add to the mixture,

Oil of almonds, thirty-four drachms.
Solution of potassa, two ounces.
Essence of lavender, half a drachm.

Mix well. As an application to chilblains.
Cadet.

POTASSII IODURETUM.[1]

BINIODIDE (SUPER-IODIDE) OF POTASSIUM.
(IODURETTED POTASSIUM.)

℞. Iodide of potassium, twenty parts.
Iodine, six parts.

Mix, and triturate together till the mass is homogeneous, and of a dark brown color.
Giordano.

To obtain a perfectly saturated salt in solution, iodine in excess is to be added to a solution of the iodide until no more is dissolved. In the following preparations there is a mixture of the iodide and superiodide.

Iodurretted Water.

℞. Iodide of potassium, six grains.
Iodine, one grain.
Water, two pints.

Dissolve. To be used as a drink at meals.
Magendie.

Lugol's Iodurretted Waters.

No. 1.

℞. Iodide of potassium, one grain and a half.
Iodine, three-quarters of a grain.
Distilled water, eight fl. ounces.

Dissolve.

No. 2.

℞. Iodide of potassium, two grains.
Iodine, one grain.
Distilled water, eight fl. ounces.

Dissolve.

No. 3.

℞. Iodide of potassium, two grains and a half.
Iodine, one grain and a quarter.
Distilled water, eight fl. ounces.

Dissolve. The first is for young children, to be taken in divided doses, in three days; the second for those of more advanced age, in two days; the third for adults, in one day. *Lugol.*

℞. Iodide of potassium, six grains.
Iodine, three grains.
Water, sixteen fl. ounces.

Dissolve. In poisoning by the vegetable alkaloids, in wineglassfuls, after the stomach has been emptied. *Bouchardat.*

Iodurretted Baths.

℞. Iodide of potassium, four scruples.
Iodine, two scruples.

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[1] Compare also the Chapter on Iodine, pp. 352, 353.

Water, ten fl. ounces.

Dissolve. To be added to a sufficient quantity of water. For children.

R. Iodide of potassium, six drachms.
Iodine, three drachms.
Water, twenty fl. ounces.

Dissolve. To be added to a sufficient quantity of water. For adults. *Foy.*

Collyrium of Ioduretted Potassium.

R. Iodide of potassium, twenty-four grains.
Iodine, one to two grains.
Rose water, six fl. ounces.

Dissolve. To be used four times a day, in scrofulous ophthalmia. *Ryan.*

Ioduretted Injection.

R. Iodide of potassium, four grains.
Iodine, two grains.
Distilled water, sixteen fl. ounces.

Dissolve.

R. Iodide of potassium, eight grains.
Iodine, four grains.
Distilled water, sixteen fl. ounces.

Dissolve. To stimulate fistulous sinuses. *Guibourt.*

Syrup of Ioduretted Potassium.

R. Ioduretted potassium, twenty grains.
Peppermint water, two fl. drachms.
Simple syrup, two fl. ounces.

Dissolve the biniodide in the peppermint water, and add the solution to the syrup. *Giordano.*

Lotion of Ioduretted Potassium.

R. Iodide of potassium, two to four grains.
Iodine, one to two grains.
Distilled water, eight fl. ounces.

Dissolve. As an application to scrofulous ophthalmia, fistulas, etc. *Lugol.*

Caustic Solutions of Ioduretted Potassium.

R. Iodide of potassium, two ounces.
Iodine, one ounce.
Distilled water, three fl. ounces.

Dissolve. *Guibourt.*

R. Iodide of potassium, one ounce.
Iodine, half an ounce.
Distilled water, six fl. ounces.

Dissolve. *Soubeiran.*

These two preparations are used to touch the eyelids in scrofulous ophthalmia.

R. Iodide of potassium,
Iodine, each, one ounce.
Distilled water, two fl. ounces.

Mix. *Guibourt.*

R. Iodide of potassium, } each,
Iodine, } one ounce.
Distilled water,

Mix. *Cadet.*

These are used to touch the surfaces of scrofulous ulcers.

Mixture of Ioduretted Potassium.

R. Iodide of potassium, four drachms.
Iodine, two grains.
Orange-flower water,
Mint water, each, three fl. ounces.

Mix. A dessertspoonful three times a day, in epilepsy. *Magendie.*

R. Iodide of potassium, half a drachm.
Iodine, half a grain.
Syrup of poppies, half a fl. ounce.
Distilled water, half a pint.

Mix. Two tablespoonfuls, three times a day, in syphilis combined with scrofula. *Tyrrell.*

Compound Ointment of Iodine.

R. Iodide of potassium, twenty-four grains.
Iodine, twelve grains.
Lard, two ounces.

Mix. *Lugol.*

R. Iodide of potassium, two drachms.
Iodine, eighteen grains.
Lard, two ounces.

Mix. *Lugol.*

R. Iodide of potassium, two drachms and a half.
Iodine, twenty-four grains.
Lard, two ounces.

Mix. In scrofulous ulcers, etc. *Lugol.*

Ointment of Biniodide of Potassium and Opium.

R. Iodide of potassium, one drachm.
Iodine, fifteen grains.

Rousseau's laudanum, two drachms.
Lard, two ounces.
Mix. As an application to scrofulous ulcers. *Foy.*

Plaster of Ioduretted Potassium.

℞. Iodide of potassium,
Iodine, each, ten grains to one scruple.
Mercurial or soap plaster, two ounces.
Mix. As an application to syphilitic and gouty swellings. *Ebers.*

POTASSII IODO-HYDRARGYRAS.

Iodo-Hydrargyrate or Hydrargyro-Iodide of Potassium.

℞. Iodide of potassium, eight grains, dissolved in ten or fifteen minims of water.
Red iodide of mercury, eleven grains.
Mix. This contains twenty grains of the hydrargyro-iodide, and is not decomposed by water. *Channing.*

℞. Bichloride of mercury, one equivalent.
Dissolve in a solution of
Iodide of potassium, four equivalents.
Evaporate to dryness, treat with alcohol, and evaporate to crystallization. *Amb. Smith.*
Dose, one-twelfth of a grain three times a day; in many cases a much smaller quantity is required to be given.

Solution of Hydrargyro-Iodide of Potassium.

℞. Iodide of potassium, three grains and a half.
Red iodide of mercury, four grains and a half.
Distilled water, one fl. ounce.
Dissolve first the iodide of potassium, and then the mercurial salt, in the water. The compound salt amounts to about eight grains. The dose is from two to five drops, three times a day, much diluted, in dyspepsia, enlargement of the spleen, dropsy, etc. *Channing.*

℞. Iodide of potassium,
Red iodide of mercury, each, eight grains.
Distilled water, eight fl. ounces.
Mix. Dose, two fl. drachms and upwards, in the twenty-four hours. *Puche.*

℞. Hydrargyro-iodide of potassium, twelve grains.
Water, sixteen fl. ounces.
Mix. *Lamothe.*

Syrup of Hydrargyro-Iodide of Potassium.

℞. Red iodide of mercury,
Iodide of potassium, each, two grains.
Syrup of acacia, fourteen troyounces.
Dissolve. *Ricord.*

Tincture of Hydrargyro-Iodide of Potassium.

℞. Hydrargyro-iodide of potassium, one grain.
Diluted alcohol, one fl. ounce.
Dissolve. Ten drops three times a day. *Channing.*

Pills of Hydrargyro-Iodide of Potassium.

℞. Red iodide of mercury,
Iodide of potassium, each, eight grains.
Sugar of milk, sixty-four grains.
Mucilage of gum Arabic, sufficient.
Mix, and make thirty-two pills. *Puche.*

℞. Iodide of potassium,
Red iodide of mercury, each, six grains.
Opium, twelve grains.
Mix, and make twenty-four pills. *Mialhe.*

Ointment of Hydrargo-Iodide of Potassium.

℞. Red iodide of mercury, seven grs.
Iodide of potassium, two scruples.
Lard, one ounce.
Mix. To be applied to tumors, two or three times a day. *Hildreth.*

℞. Hydrargyro-iodide of potassium, one scruple.
Lard, one ounce.
Mix. *Lamothe.*

POTASSII NITRAS.

NITRATE OF POTASSIUM.
(NITRE.—SALTPETRE.)

Purified Nitrate of Potassium.

℞ Nitrate of potassium, four pounds.
Distilled water, five pints.

Dissolve the nitre in two pints of boiling water, and stir the solution till it cools. Decant, drain the crystals, and wash with the remainder of the water. Finally dry in an oven. *Dub. Ph.* 1826.

Dose, five to ten grains.

Fused Nitrate of Potassium. (Sal Prunelle.)

℞ Nitrate of potassium, at will.

Melt in a crucible, and cast it into moulds. *Guibourt.*

℞ Nitrate of potassium,
two pounds and a half.

Melt in a crucible, adding gradually

Sulphur, half an ounce.

After the deflagration, and the mixture is somewhat cooled, pour it into a basin, and turn this in all directions, so that the mass may cool in a thick and uniform layer. When cool, break this in pieces. *Span. Ph.*

This preparation will contain some sulphate of potassium.

Powder of Nitrate of Potassium and Orris Root.

℞ Nitrate of potassium, one drachm.
Spermaceti, two drachms.
Sugar,
Orris root, each, one ounce.

Mix. A teaspoonful, in catarrhal affections. *Augustin.*

Nitrous Powders.

℞ Powdered nitre, one drachm.
Tartar emetic, one grain.
Calomel, four grains.

Mix, and divide into eight powders. One every two hours. As a diaphoretic, etc., in fevers. *Dewees.*

℞ Nitrate of potassium, two ounces.
Bitartrate of potassium,
four drachms.
Tartar emetic, four grains.

Mix. Dose, ten to thirty grains. *Univer. Coll. Hosp.*

℞ Nitrate of potassium, one part.
Cream of tartar, two parts.
Sugar, six parts.

Powder and mix. This is the *Pulvis temperans* of *Ph. Germ.*

Dose, ten to thirty grains.

℞ Nitrate of potassium,
Marsh mallow root,
each, one part.
Liquorice root, two parts.
Gum Arabic,
Milk sugar, each, two parts.

Mix the powders thoroughly. *Poudre tempérante gommeuse. Paris Codex.*

℞ Sulphate of potassium,
Nitrate of potassium,
each, nine parts.
Cinnabar, two parts.

Rub into powder. *Poudre tempérante de Stahl. Paris Codex.*

Powder of Nitrate of Potassium and Squill.

℞ Nitrate of potassium, fifteen grs.
Powdered squill,
" pimento,
each, ten grains.

Mix. Dose, ten grains, two to three times a day, as a diuretic. *Swediaur.*

Powder of Nitrate of Potassium and Camphor.

℞ Nitrate of potassium, ten grains.
Camphor, four to eight grains.
Gum Arabic, twenty-four grains.

Mix, and triturate well; one-third to one-half at a dose. *Foy.*

Pills of Nitrate of Potassium.

℞ Nitrate of potassium, six drachms.
Powdered gum Arabic,
three drachms.
" liquorice root,
" marsh mallow,
each, three ounces.
Simple syrup, sufficient.

Mix, and make pills of five grains. In inflammation of the urethra and dysuria; five or six, three times a day. *Foy.*

Pills of Nitrate of Potassium and Camphor.

℞ Nitrate of potassium, four parts.
Camphor,
Conserve of roses, each, two parts.

Mix, and make pills of four grains. Two to ten a day, in gonorrhœa. *Guibourt.*

Nitrated Emulsion.

℞. Nitrate of potassium, two drms.
Sugar of milk, one ounce.
Extract of henbane, half a scruple.
Emulsion of almonds, one pound.

Mix, and dissolve. A spoonful every hour, in gonorrhœa. *Phœbus.*

Cooling Lotion of Nitrate of Potassium.

℞. Nitrate of potassium,
Sal ammoniac, each, one part.
Water, forty-eight parts.

Dissolve, and add

Vinegar, four parts.

As a lotion and application, by means of compresses, to contusions and ecchymoses. *Hep. Ph.*

Nitrate of Potassium Gargle.

℞. Nitrate of potassium,
seven drachms.
Barley water, fourteen fl. ounces.
Oxymel, one fl. ounce and a half.

Mix. As a gargle, in inflammatory sore throat. *Ainslie.*

Mixture of Nitrate of Potassium.

℞. Nitrate of potassium, eight grains.
Tincture of digitalis,
fifteen to twenty drops.
Water, ten fl. drachms.
Sweet spirit of nitre,
Syrup of roses,
each, half a fl. drachm.

Mix. To be taken twice a day, as a diuretic. *Burke.*

℞. Nitrate of potassium,
ninety grains.
Mucilage of acacia, two fl. ounces.
Antimonial wine, forty minims.
Syrup of orange-peel,
half a fl. ounce.
Water, four fl. ounces.

Mix. One fl. ounce, three times a day, in remittent fever, with hot skin. *Ainslie.*

℞. Nitrate of potassium,
eight to ten grains.
Water, eleven fl. ounces.
Solution of tartar emetic,
fifteen drops.
Simple syrup,
Sweet spirit of nitre,
each, half a fl. drachm.

Mix. To be taken twice a day, as a diaphoretic. *Burke.*

℞. Extract of chamomile,
one drachm.
Nitrate of potassium,
half an ounce.
Chamomile water, four fl. ounces.

Mix. A spoonful every two or three hours, as an antispasmodic. *Radius.*

℞. Nitrate of potassium,
half an ounce.
Barley water, one pound.
Syrup of marsh mallow,
six ounces.
Oil of almonds, four ounces.

Mix. A glassful every four hours, in dysury and strangury. *Cadet.*

℞. Nitrate of potassium,
two drachms.
Decoction of asparagus,
two pounds.
Oxymel of squill, half an ounce.

Mix. To be taken in divided doses, as a diuretic. *Brera.*

℞. Juniper berries,
bruised, two ounces.
Boiling water, one pint.

When cold, strain, and add

Nitrate of potassium,
two drachms.
Syrup of ginger, one fl. ounce.

Dose, one ounce to an ounce and a half, every three or four hours, in dropsy. *Hartman.*

Nitrated Paper.

Imbue paper with a solution of nitrate of potassium in four parts of water, and dry. *Ph. Germ.*

The fumes of the burning paper for inhalation in asthma, etc.

POTASSII OXALAS.

Oxalate of Potassium.

The article usually sold as oxalate of potassium, *salt of sorrel*, etc., is the quadroxalate of potassium. It is not much used in medicine, but is employed in the arts, to remove ink and iron stains from linen and cotton; to bleach the straw for bonnets, etc.

R. Oxalic acid, one part.
Carbonate of potassium, sufficient

to saturate; add to the solution three parts more of the acid; evaporate, and crystallize. *Cooley.*

Powder of Oxalate of Potassium.

R. Oxalate of potassium, twenty grains.
Tartrate of potassium,
Sulphate of potassium, each, one drachm.
Scammony, fifteen grains.
Red saunders, ten grains.

Mix. To be taken in the morning, in intermittent fevers. Two doses are stated to be sufficient. *Giordano.*

Lozenges of Oxalate of Potassium.

R. Oxalate of potassium, one drachm and a half.
White sugar, eight ounces.
Gum tragacanth, two scruples.
Lemon water, five drachms.
Oil of lemon, eight drops.

Mix, and make lozenges of twelve grains. *Guibourt.*

POTASSII PERMANGANAS.

PERMANGANATE OF POTASSIUM.

R. Potassa, five ounces.
Black oxide of manganese, four ounces.
Chlorate of potassium, three ounces and a half.
Water, fifty ounces.
Diluted sulphuric acid, sufficient.

Powder the chlorate and mix with the manganese and with the potassa previously dissolved in four ounces of water. Evaporate to dryness, powder, and in a crucible heat to dull redness for an hour. Cool, powder, boil with thirty ounces of water, decant the clear solution, repeat the boiling and decantation, neutralize the united liquids accurately with sulphuric acid, evaporate until a pellicle forms, and crystallize. Drain the crystals, boil with six ounces of water, strain through asbestos, crystallize, drain, and dry the crystals under a bell-glass over sulphuric acid. *Brit. Ph.*

It has been recommended in acute rheumatism, diabetes, etc., in doses of one to three grains in solution largely diluted; but is mostly employed externally as a mild escharotic and oxidizer. It is an active deodorizer, but seems to possess no antiseptic powers.

Solution of Permanganate of Potassium.

R. Permanganate of potassium, eighty grains.
Distilled water, twenty ounces.

Dissolve. *Brit. Ph.*

The solution of *U. S. Ph.* is of the same strength.

R. Permanganate of potassium, eighty grains.
Water, ten ounces.

Dissolve. Condy's disinfecting fluid. *Squire.*

Disinfecting Powder.

R. Permanganate of potassium, } equal
Carbonate of calcium, } parts.
Starch, }

Mix. *Demarquay.*

POTASSII SILICAS.

SILICATE OF POTASSIUM.

R. Powdered quartz or flint, one part.
Carbonate of potassium, two parts.

Mix, and fuse in a crucible; when cool, dissolve in water; filter, and evaporate to dryness. *Ure.*

Solution of Silicate of Potassium.

R. Silicate of potassium, ten to fifteen grains.
Distilled water, six to eight fl. ounces.

Dissolve. To be taken twice a day, to remove gouty concretions. *Ure.*

Soluble Glass.

R. Carbonate of potassium, seventy parts.
Carbonate of sodium, fifty-four parts.
Silex, one hundred and ninety-two parts.

Melt together. The resulting glass is soluble in boiling water. The solution forms a fine, transparent, elastic varnish. *Döbereiner.*

POTASSII SULPHAS.

SULPHATE OF POTASSIUM.

R. Residuum of the preparation of nitric acid, two pounds.
Boiling water, two gallons.

Expel the excess of acid by heating the salt in a crucible; boil the remainder in the water, till a pellicle forms; filter the solution; set aside to crystallize; pour off the water, and dry the crystals. *Lond. Ph.* 1836.

A mild cathartic, in doses of one drachm; but in doses of four or five drachms it acts as an irritant.

Compound Saline Powder.

℞. Sulphate of potassium, three ounces.
Chloride of sodium,
Sulphate of magnesium,
each, four ounces.

Dry the salts separately, with a gentle heat; then triturate them well together, and preserve in glass vessels. *Ed. Ph.*

Aperient in doses of two or three drachms, dissolved in half a pint of carbonic acid water. To be taken before breakfast.

℞. Sulphate of potassium, two parts.
Nitrate of potassium, one part.

Powder, and mix. *Pulvis temperans* of some pharmacopœias. In febrile conditions.

Powder of Sulphate of Potassium and Rhubarb.

℞. Sulphate of potassium, one drachm.
Powdered rhubarb, half a drachm.
" chamomile, one drachm.

Mix, and divide into six powders. One, twice a day, in sugar and water, in dyspepsia and torpor of the bowels. *Ellis.*

℞. Sulphate of potassium, two ounces.
Powdered rhubarb, one ounce.
Sal ammoniac, half an ounce.

Mix. Half a drachm, in same cases as the last. *Pfaff.*

Pills of Sulphate of Potassium.

℞. Sulphate of potassium, two drachms.
Powdered rhubarb, two scruples.
Oil of fennel, six drops.
Extract of blessed thistle, sufficient.

Mix, and make sixty pills. Dose, five or six a day, as a purgative. *Phœbus.*

Mixture with Sulphate of Potassium.

℞. Centaury,
Chamomile, each, one ounce.
Water, sufficient
to obtain three pints of infusion; add
Sulphate of potassium,
Honey, each, two ounces.

Three wineglassfuls a day, in fevers. *Swediaur.*

POTASSII SULPHO-CYANIDUM.

Sulpho-cyanide of Potassium.

℞. Ferro-cyanide of potassium, three parts.
Sulphur, one part.

Pack in a crucible, heat to redness for an hour, treat with alcohol, and evaporate to crystallization. *Van Mons.*

℞. Prussian blue, three parts.
Sulphuret of potassium, one part.

Put the mixture into a covered crucible, and heat to a dull redness for half an hour; treat with alcohol, filter the solution, evaporate, and crystallize. *Van Mons.*

℞. Digest an aqueous solution of cyanide of potassium with sulphur, of which it will take up one-third.

Filter, and evaporate. *Beasley.*

POTASSII SULPHURETUM.

Sulphuret of Potassium. (Liver of Sulphur.)

℞. Sulphur, one ounce.
Carbonate of potassium, two ounces.

Rub the carbonate of potassium, previously dried, with the sulphur; melt the mixture in a covered crucible over the fire; then pour it out, and, when cold, put it in a bottle, which is to be well stopped. *U. S. Ph.*

A stimulant expectorant and diaphoretic, in small doses, poisonous in large; used externally in many cutaneous diseases. Dose, from two to ten grains, several times a day.

Hyposulphited Sulphuret of Potassium.

℞. Sublimed sulphur, one part.
Solution of potassium, three parts.

Mix, and heat on a sand-bath, until it marks 39° B. *Guibourt.*

It consists of three parts of sulphuret, and one of hyposulphite of potassium.

Ferro-Sulphuret of Potassium.

℞. Carbonate of potassium,
Sulphur, each, one ounce.
Black oxide of iron, two drachms.

Mix, and melt in a crucible, pour out on a slab of marble, break in pieces, and keep in a well-closed bottle. Dose, three to four grains. *Ferrara Ph.*

Sulphuret of Potassium and Cream of Tartar.

℞. Sulphuret of potassium,
four scruples.
Cream of tartar, four drachms.

Mix, and divide into twenty-four powders. Dose, one every four hours, in a glass of sweetened water. Said to be efficacious in mercurial salivation. *Bories.*

Bolus of Sulphuret of Potassium.

℞. Sulphuret of potassium,
three grains.
Conserve of elder berries,
sufficient.

Mix. Make six boluses; one every three hours. In mercurial salivation. *Brera.*

℞. Sulphuret of potassium, six grains.
Black oxide of iron, three grains.
Extract of quassia, ten grains.
Burnt sponge, sufficient.

Mix, and make a bolus. One, morning and evening, in goitre and glandular affections. *Phœbus.*

Pills of Sulphuret of Potassium.

℞. Sulphuret of potassium,
one drachm.
Extract of liquorice, sufficient.

Mix, and make thirty pills. Two to five, several times a day.

Compound Pills of Sulphuret of Potassium.

℞. Sulphuret of potassium, Ammoniac, Extract of dandelion, each, one drachm.
Soap,
Rhubarb, each, half a drachm.
Opium, three grains.

Mix, and make pills of two grains. *Radius.*

Electuary of Sulphuret of Potassium.

℞. Butter of cacao, two drachms.
Oil of almonds, half an ounce.
Melt together, and add, triturating well,
Sulphuret of potassium,
ten grains.
Sugar, three drachms.

As an alterative for children, in teaspoonful doses. *Phœbus.*

Syrup of Sulphuret of Potassium.

℞. Sulphuret of potassium,
eight grains.
Distilled water, sixteen grains.

Dissolve, and add

Simple syrup, one ounce.

Paris Codex 1836.

A teaspoonful, for croup in children.

Compound Syrup of Sulphuret of Potassium.

℞. Sulphuret of potassium,
one ounce.
Fennel water, sixteen ounces.
Simple syrup, thirty-eight ounces.

Mix. Once much celebrated as *Willis's syrup*, in croup, etc. *Giordano.*

Syrup of Hyposulphited Sulphuret of Potassium.

℞. Hyposulphited sulphuret
of potassium, sixteen grains.
Simple syrup, one ounce.

Mix. *Guibourt.*

Water of Sulphuret of Potassium.

℞. Washed sulphur, one part.
Solution of potassa, eleven parts.

Boil for ten minutes, and filter. Keep in well-stopped bottles. *Dub. Ph.* 1826.

This is not analogous to a solution of sulphuret of potassium, as it contains much hyposulphite of potassium. Dose, ten minims to one fl. drachm, three times a day.

Tincture of Sulphuret of Potassium.

℞. Sulphuret of potassium,
four ounces.
Diluted alcohol, sixteen ounces.

Digest for twenty-four hours, and strain. *Quincy.*

Recommended in itch, in doses of sixty drops.

Lotion of Sulphuret of Potassium.

℞. Sulphuret of potassium,
one ounce.
Water, half a pint.

Dissolve. As a wash in herpetic and other cutaneous eruptions. *Ellis.*

℞. Sulphuret of potassium, one part.
Water, fifty parts.
Dissolve. *Paris Codex.*

Compound Lotion of Sulphuret of Potassium.

℞. Sulphuret of potassium, half an ounce.
Soap, one ounce.
Alcohol, four fl. ounces.
Tincture of myrrh, half a fl. ounce.
Lime water, one pint.
Mix. As an application in tinea capitis. *Ellis.*

℞. Sulphuret of potassium, one to two ounces.
Water, one pint.
Dissolve.

℞. Muriatic acid, one to two fl. ounces.
Distilled water, two pints.
Mix an ounce of each solution with four ounces of warm water. As an application in psora. *Alibert.*

℞. Sulphuret of potassium, three drachms.
Soap, one drachm and a half.
Lime water, seven and a half fl. ounces.
Diluted alcohol, two fl. ounces.
Mix. *Burns.*
Known as *Barlow's lotion*, and used in various cutaneous diseases.

℞. Sulphuret of potassium, two drachms.
Soap, two drachms and a half.
Lime water, seven fl. ounces.
Alcohol, one fl. drachm.
Mix. *Biett.*
As a lotion in porrigo.

℞. Sulphuret of potassium, four ounces.
Water, one pint and a half.
Sulphuric acid, half an ounce.
Mix. As a lotion in itch, to be used morning and evening. *Dupuytren.*

℞. Sulphuret of potassium, one drachm.
Almond oil, one ounce.
Camphor, twenty grains.
Mix. *Valentin.*

Sulphuret of Potassium-Bath.

℞. Sulphuret of potassium, four ounces.
Water, twelve ounces.
Dissolve, and mix with the water of a bath. *Béral.*

℞. Sulphuret of potassium, one ounce.
Common salt, two ounces.
Carbonate of sodium, four drms.
Leaves of sage, one to two handfuls.
Water, six quarts.
Boil for twenty-four hours. In fomentations, douches, etc., in spina ventosa and scrofula. *St. Marie.*

℞. Sulphuret of potassium, four ounces.
Water, two hundred pints.
Mix, and add
Glue, two pounds.
dissolved in ten pints of boiling water. *Foy.*

Injection of Sulphuret of Potassium.

℞. Sulphuret of potassium, one drachm.
Distilled water, eight to twelve ounces.
Dissolve. In gonorrhœa. *Wedekind.*

Mixture of Sulphuret of Potassium.

℞. Sulphuret of potassium, one drachm and a half.
Bicarbonate of potassium, ten grains.
Oil of peppermint, one to two drops.
Syrup of orange-peel, two ounces.
Mucilage, one ounce.
Mix. A teaspoonful, every two hours, as an alterative, in scrofula. *Lockstaedt.*

℞. Sulphuret of potassium, one scruple.
Carbonate of potassium, ten grains.
Peppermint water, two ounces.
Syrup of saffron, one ounce.
Mix. A spoonful, every two hours, in cutaneous diseases. *Phœbus.*

℞. Sulphuret of potassium, one scruple.
Water, one ounce.
Syrup of cinnamon, two drachms.

Mix. To be taken in three doses, in mercurial diseases. *Dzondi.*

℞ Sulphuret of potassium, one scruple.
Kermes mineral, ten grains.
Syrup of seneka, two ounces.
Anisated ammonia, one scruple.
Mix. A spoonful every hour, in croup. *Hagen.*

℞ Sulphuret of potassium,
Sugar, each, one drachm.
Water, one pint.
Mix. Has been advised as an antidote in poisoning by arsenic. *Augustin.*

Ointment of Sulphuret of Potassium.

℞ Sulphuret of potassium, thirty grains.
Prepared lard, one ounce.
Mix thoroughly. *Brit. Ph.*

℞ Sulphuret of potassium,
Carbonate of sodium, each, three drachms.
Lard, three ounces.
Mix. As an application in tinea capitis. *Alibert.*

℞ Soap, one pound.
Water, one ounce.
Soften by means of a water-bath, and add
Sulphuret of potassium, three ounces.
Oil of poppy-seed, two pounds.
" thyme, one drachm.
Mix well. *Jadelot.*

℞ Powdered soap, two ounces.
Sulphuret of potassium,
Water, each, one ounce.
Mix well, and add, gradually,
Olive oil, five ounces.
This liniment alters rapidly when exposed to the air. *Béral.*

Compound Plaster of Sulphuret of Potassium.

℞ Sulphuret of potassium,
Powdered hemlock, each, two drachms.
Camphor,
Turpentine, each, four drachms.
Soap, half a drachm.
Yellow wax, one ounce.
Simple plaster, four ounces.
Melt and mix well. As a dressing to tumefied lymphatic glands. *Bories.*

Soap of Sulphuret of Potassium.

℞ Sulphuret of potassium, one part.
Boiling water, two parts.
Dissolve, and add
Yellow wax, one part.
Evaporate, stirring continually. *Bavar. Ph.*

POTASSII TARTRAS.

Tartrate of Potassium.

℞ Pure carbonate of potassium, sixteen troyounces.
Cream of tartar, in fine powder, sufficient.
Boiling water, eight pints.
Dissolve the carbonate in the water, add gradually the cream of tartar until neutralized, and boil. Filter the liquid, evaporate till a pellicle forms, and set aside to crystallize. Pour off the liquid, and having dried the crystals on bibulous paper, keep them in closely-stopped bottles. *U. S. Ph.*
A mild, cooling purgative, in doses from a drachm to an ounce.

Powder of Tartrate of Potassium and Rhubarb.

℞ Tartrate of potassium, two drachms.
Powdered rhubarb,
" orange-peel, each, one drachm.
Oil of cajeput, one scruple.
Mix. A teaspoonful, three times a day, in obstructions of the portal system. *St. Marie.*

Mixture of Tartrate of Potassium.

℞ Tartrate of potassium, six to eight drachms.
Infusion of chicory, twenty ounces.
Manna, two ounces.
Mix. To be taken in the morning, in four portions, every day or every second day, for a fortnight, in chronic affections of the liver. *Grant.*

℞ Tartrate of potassium, one ounce.
Extract of soapwort, half an ounce.
Balm water, six ounces.
Mix. Two spoonfuls, night and morning, in all forms of hemorrhoidal disease. *Radius.*

℞. Tartrate of potassium, half an ounce.
Extract of centaury, two drachms.
Water, eight fl. ounces.

Mix. Two spoonfuls every hour or two, in obstructions of the liver. *Swediaur.*

℞. Tartrate of potassium, one drachm.
Nitrate of potassium, half a drachm.
Manna, one ounce.
Decoction of dandelion, six fl. ounces.

Mix. Two spoonfuls every two hours, in dropsy consecutive to scarlet fever.
Phœbus.

PRINOS.

Black Alder.

This, which is also known as *Winterberry*, is an indigenous shrub, found in most parts of the country, principally in low, moist situations; flowering in June, and bearing numerous scarlet berries, which remain on the bush after the fall of the leaves.

Sex. Syst. Hexand. monog. *Nat. Syst.* Aquifoliaceæ.

Linn. Sp. Pl. 471. Griffith, Med. Bot. 434.

The officinal portion is the bark, which, when dried for use, is in slender pieces, of a greenish-white color internally, and of an ash-gray, mixed with brown, externally; brittle, inodorous, and of a bitter, astringent taste. It is tonic and astringent, and has been used with success in diarrhœa, intermittent fevers, etc. The dose is from thirty grains to a drachm, three or four times a day.

Decoction of Black Alder.

℞. Black alder, two ounces.
Boiling water, three pints.

Boil down to a quart, and strain. One gill every two hours. *W. P. C. Barton.*

PRUNUM.

Prunes.

Prunes are the dried fruit of various varieties of *Prunus domestica*, or cultivated Plum tree. They are principally derived from the south of France, and are much used as an article of dessert; but are also employed in medicine, as a laxative, either alone or in combination, especially with senna, as in the confection of senna, etc., in the form of pulp.

Pulp of Prunes.

℞. Prunes, at will.

Soften the prunes in the vapor of boiling water, and having removed the stones, beat the remainder in a mortar, and pass it through a hair sieve. *U. S. Ph.* 1850.

PRUNUS VIRGINIANA.

Wild-Cherry Bark.

This is the bark of *Cerasus serotina*, though the *U. S. Ph.* still retains the old name of the tree as the designation for the medicine. The *Cerasus serotina* is found in most parts of the United States, and in some situations attains a very large size.

Sex. Syst. Icosand. monog. *Nat. Syst.* Drupaceæ.

De Condelle, Prod. ii. 540. Griffith, Med. Bot. 288.

The bark of both the root and branches is used, but the former is to be preferred. As dried for use, it is in pieces of various sizes, deprived of epidermis; of a reddish-brown color, and readily pulverized; when fresh it has an odor of bitter almonds, which is much diminished on drying, but reappears on maceration in water; the taste is bitter and aromatic. It is tonic, but it also exercises a sedative action on the circulatory and nervous systems, and is much used in a variety of diseases. The dose in powder is half a drachm to two drachms.

Infusion of Wild-Cherry Bark.

℞. Wild-cherry bark, in powder, No. 60, half a troyounce.
Cold water, sufficient.

Obtain by percolation one pint. *U. S. Ph.*

Dose, two fl. ounces, three or four times a day.

℞. Powdered wild-cherry bark, one ounce.
Orange-peel, two drachms.
Water, one pint.

Macerate the bark for six hours, and then add the orange-peel. Dose, a wineglassful.
Ellis.

Syrup of Wild-Cherry Bark.

℞. Wild-cherry bark, in powder, No. 60, five ounces.
Water, sufficient.
Sugar, in coarse powder, twenty-eight troyounces.

Moisten the bark thoroughly with water, macerate in a close vessel for twenty-four hours, pack firmly in a glass percolator, and displace slowly one pint; transfer to a bottle, add the sugar, and dissolve by agitation. Dose, a tablespoonful. *U. S. Ph.*

Fluid Extract of Wild-Cherry.

℞ Wild-cherry, in powder, No. 60, sixteen troyounces.
Glycerin, four fl. ounces.
Water, eight fl. ounces.
Stronger alcohol, sufficient.

Mix glycerin and water, moisten the powder with half a pint of the mixture, macerate for four days in a close vessel; then displace, using first the remaining mixture, afterwards stronger alcohol, until thirty-two fl. ounces have been obtained. Reserve the first twelve fl. ounces, evaporate the remainder to four fl. ounces, filter, rinse the filter with a little alcohol to preserve the measure, and mix with the reserved portion. *U. S. Ph.*

Very astringent and bitter, it has little sedative action. Dose, thirty to sixty minims.

PYRETHRUM.

Pellitory.

This is the root of *Anacyclus pyrethrum*, a small plant with perennial roots and annual stems; a native of the countries bordering on the Mediterranean, hence it is also called Roman or Spanish pellitory.

Sex. Syst. Syngen. super. *Nat. Syst.* Asteraceæ.

De Candolle, Prod. vi. 15. Griffith, Med. Bot. 402.

The dried root is about the size of the little finger, with a thick, brown bark, marked with black, shining points; it is inodorous; its taste is at first slight, but afterwards extremely acrid, leaving a burning, pricking sensation in the mouth. It is a powerful local irritant, and is principally used as a masticatory and sialagogue; but has also been employed in intermittents, palsies, etc.

Some pharmacopœias recognize the German pellitory, which is the root of *Anacyclus officinarum*, a plant indigenous to Central Europe. It resembles the former in appearance, and has the same properties, but is rather less acrid.

Lozenges of Pellitory.

℞ Powdered pellitory,
" mastich,
each, one drachm.
Mucilage of tragacanth, sufficient.

Mix, and make lozenges of twelve grains each. As a masticatory in toothache. *Foy.*

Tincture of Pellitory.

℞ Pellitory, one part.
Alcohol, sufficient.

Displace five parts. *Paris Codex.*

℞ Pellitory, four ounces.
Rectified spirit, sufficient.

Obtain by maceration and displacement twenty fl. ounces of tincture. *Brit. Ph.*

Compound Tincture of Pellitory.

℞ Pellitory, four drachms.
Camphor, three drachms.
Opium, one drachm.
Oil of cloves, two drachms.
Alcohol, six fl. ounces.

Macerate for eight days, and filter. As a sialagogue in toothache. *Brande.*

℞ Pellitory, one ounce.
Para cress flowers, four ounces.
Italian elecampane leaves, one ounce.
Alcohol, eight fl. ounces.

Macerate for fifteen days, express, and filter. Much celebrated as an odontalgic, under the name of *Paraguay Roux.* *Gray.*

Liniment of Pellitory.

℞ Tincture of pellitory, six fl. drachms.
Camphorated oil, half a fl. ounce.
Water of ammonia, half a fl. drachm.

Mix. As a lotion for chilblains and in rheumatic pains. *Radius.*

Plaster of Pellitory.

℞ Yellow wax, three ounces.
Turpentine, two ounces and a half.

Melt together, and add

Ammoniac,
Sagapenum,
Galbanum,
Powdered pellitory,
" mustard,
} each, one ounce.

Mix well. As a rubefacient application in rheumatism, etc. *Cadet.*

Extract of Pellitory.

℞ Pellitory, ground, one pound.
Alcohol, two pints.
Ether, half a pint.

Mix the ether with a pint of the alcohol, pour it gradually on the powder, and put it in a displacer; when it ceases to drop, add the remainder of the alcohol, and finally sufficient diluted alcohol to displace two pints and a half in all. Allow the

ethero-alcoholic tincture to evaporate spontaneously, or with a moderate heat, until a soft extract is obtained.

Employed to destroy the sensibility of the nerves of teeth, previous to plugging, or for toothache. *W. Procter.*

Q.

QUASSIA.

Quassia.

Under the name of Quassia, the wood of two different plants has been used—that of *Q. amara*, and of *Simaruba excelsa*, the latter being alone recognized in the *U. S. Ph.* This is a large tree found in many of the West India Islands, and known as the *bitter ash*. The former is a large shrub or small tree, and is indigenous to Surinam.

Sex. Syst. Pentand. monog. *Nat. Syst.* Simarubaceæ.

Lindley, Flor. Med. 208. Griffith, Med. Bot. (Picræna), 200.

It is found in commerce, in billets of various sizes, having a smooth, brittle bark. The wood is white, but becomes yellowish on exposure to the air; it has scarcely any smell, but possesses an intense, permanent bitter taste. It is a pure and powerful tonic, and is much used for that purpose. It is seldom given in substance.

Infusion of Quassia.

℞ Rasped quassia, two drachms.
Cold water, one pint.

Macerate for twelve hours, and strain. *U. S. Ph.*

Brit. Ph. uses sixty grains to ten fl. ounces of cold water.

Dose, two fl. ounces, three or four times a day.

Compound Infusion of Quassia.

℞ Quassia, Virginia snakeroot, Orange-peel, each, half an ounce.
Boiling water, two pints.

Infuse and strain. A teacupful, cold, three times a day. *Ellis.*

Extract of Quassia.

℞ Quassia, in powder, No. 50, one pound.
Water, sufficient.

Exhaust by percolation, boil to three-fourths of the bulk of the infusion, strain, and by a water-bath evaporate to the proper consistence. *U. S. Ph.* and *Brit. Ph.*

Ph. Germ. exhausts the wood by boiling with water.

Dose, three to five grains. A very efficient bitter tonic.

Tincture of Quassia.

℞ Quassia, in powder, No. 50, two troyounces.
Diluted alcohol, sufficient.

Obtain by displacement two pints. *U. S. Ph.*

Dose, two fl. drachms.

Brit. Ph. directs three-fourths of one ounce of quassia to twenty fl. ounces of tincture.

Tincture of Quassia and Cinchona.

℞ Cinchona, Quassia, Colombo, Gentian, Serpentaria, Chamomile, each, in coarse powder, half an ounce.
French brandy, two pints.

Macerate fourteen days, and extract by displacement. A very valuable combination of bitters. Dose, one to four fl. drachms. *E. Parrish.*

Compound Tincture of Quassia.

℞ Bruised cardamom,
" cochineal, each, half an ounce.
Powdered cinnamon,
Chipped quassia, each, six drachms.
Raisins, seven ounces.
Diluted alcohol, two pints (imp.)

Digest for seven days, strain, express residue, and filter. Dose, one or two fl. drachms. *Ed. Ph.*

Wine of Quassia.

℞ Rasped quassia, half an ounce.
Orange-peel, two drachms.
Wine, one pint and a half.

Macerate for twenty-four hours, express, and filter. Dose, three fl. drachms to a fl. half ounce, twice a day. *Radius.*

QUERCUS.

Oak Bark.

Several species of oak are recognized as officinal in the pharmacopœias, viz., the *Q. alba* or *White oak*, and *Q. tinctoria* or *Black oak*, in the *U. S. Ph.*; *Q. pedunculata*, European *White oak*, in the *Brit. Ph.* and *Ph. Germ.*; and *Q. sessiliflora*, European oak, in some European pharmacopœias.

Sex. Syst. Moncœc. polyand. *Nat. Syst.* Corylaceæ.

Griffith, Med. Bot. 585.

The part used is the bark; this, in all the species, is astringent and tonic, and has been used in a variety of diseases, but more generally as an external application than as an internal remedy. The dose is from thirty grains to a drachm.

The infusion of roasted acorns has been used in Europe in scrofulous affections.

Compound Powder of Oak Bark.

℞ Powdered oak bark, one scruple.
Calamus,
Gentian, each, five grains.

Mix. To be taken every three hours, in apyrexia of intermittents. *Augustin.*

Extract of Oak Bark.

℞ Powdered oak bark, one pound.
Water, one gallon.

Boil down to one-half, express, and filter. Evaporate at a heat of 200° F. until it begins to thicken, then reduce by a heat of 100° F. to the proper consistence.

Dub. Ph. 1826.

The dose is from ten to forty grains.

Decoction of White Oak Bark.

℞ White oak bark,
bruised, one troyounce.
Water, sufficient.

Boil with a pint of water for half an hour, and obtain a pint of strained liquid.

U. S. Ph.

The decoction of *Brit. Ph.* is of about the same strength.

The dose is a wineglassful, as an astringent in chronic diarrhœa, etc.

Gargle of Oak Bark.

℞ Decoction of oak bark, one pint.
Add
Alum, half a drachm.
Brandy, two fl. ounces.

As a gargle in chronic sore throat, with relaxed uvula; and as an injection in leucorrhœa. *Ellis.*

Injection of Oak Bark.

℞ Decoction of oak bark, four fl. ounces.
Powdered galls, thirty grains.
Tincture of catechu, two fl. drachms.

Mix. Useful as a palliative in cancer of the uterus. *Ashwell.*

Cataplasm of Oak Bark.

℞ Powdered oak bark, } each, one
" catechu, } ounce.
Barley meal,
Water, sufficient.

Boil to the proper consistence. *Foy.*

As an application in gangrene and mortification.

Confection of Acorns.

℞ Powdered acorns, three ounces.
" red coral,
" catechu, each,
one ounce and a half.
Confection of dog rose, ten ounces.
Syrup of red roses, sufficient.

Mix. One drachm every four hours, in chronic diarrhœa. *Bories.*

Acorn Coffee.

℞ Acorns, roasted, six drachms.
Coffee, roasted, two drachms.
Water, one pint.

Boil for a short time, and strain. Two or three cupfuls a day, in scrofula and rachitis. *Augustin.*

QUINIA.

Quinine.—Quinia.

℞ Sulphate of quinia, one part.
Boiling water, thirty parts.

Dissolve. Add water of ammonia sufficient to precipitate the quinia, wash the precipitate in distilled water, and dry it.

Tincture of Quinia.

℞ Quinia, one part.
Alcohol, seven parts.

Dissolve. Dose, twenty to forty drops. *Béral.*

Ethereal Solution of Quinia.

℞. Sulphate of quinia, dried at 212°, six drachms.
Stronger ether, sufficient.

Dissolve the quinia in one pint of water, with the aid of diluted sulphuric acid; precipitate with ammonia water, avoiding an excess, agitate with fifteen fl. ounces of the ether to dissolve the quinia, separate the ethereal solution, evaporate at a moderate heat to two and a half fl. ounces, and add stronger ether so that five minims of the solution shall leave on evaporation exactly one grain of quinia. *Ch. Rice.*

For hypodermic injections.

Impure Quinia.

℞. Yellow bark, one hundred parts.
Muriatic acid, five parts.
Water, five hundred parts.

Boil, decant, and repeat process three times with the same proportions of acid and water; unite decoctions, precipitate with milk of lime, wash and dry the precipitate, treat it several times with boiling alcohol, mix, and filter the solutions, and distil off the spirit. *Trousseau.*

This is said to be as active as the sulphate, and to be less unpleasant to the taste. It is given in the same doses.

Tincture of Impure Quinia.

℞. Impure quinia, one ounce.
Alcohol,
Distilled water, each, twelve fl. ounces.

Mix. *Piorry.*

Dose, a tablespoonful.

Amorphous Quinia, or Chinoidin.

℞. Mother waters of sulphate of quinia, at will.
Solution of carbonate of potassium, sufficient

to precipitate. Wash and dry this precipitate; dissolve in sulphuric ether, decant, and evaporate by a gentle heat. *Neligan.*

Tincture of Chinoidin.

℞. Chinoidin, two parts.
Alcohol, seventeen parts.
Muriatic acid, one part.

Dissolve and filter. *Ph. Germ.*

QUINIÆ ACETAS.

Acetate of Quinia.

℞. Quinia, two parts.
Distilled water, three parts.

Heat, and add as much acetic acid as will dissolve the quinia, and render the solution somewhat acid. Filter whilst boiling, and set aside to crystallize. *Cottereau.*

A more ready way to prepare it is, by mixing hot solutions of sulphate of quinia and acetate of potassium or sodium, when, on cooling, acetate of quinia will crystallize.

Acts like the other salts of quinia, and is in no way superior to them; owing to its sparing solubility in water, it has very little taste when taken in form of powder. Dose, one to ten grains, according to circumstances.

QUINIÆ ARSENIAS.

Arseniate of Quinia.

℞. Arsenic acid, one drachm and a half.
Distilled water, six fl. ounces.
Quinia, five drachms.

Boil till solution takes place. Filter, let crystallize, and purify by recrystallization. In intermittents. Dose, one-tenth to one-fourth of a grain. *Bourieres.*

QUINIÆ ARSENIS.

Arsenite of Quinia.

℞. Sulphate of quinia, five hundred grains.
Water, acidulated with sulphuric acid, sufficient to dissolve.

Precipitate by solution of ammonia; collect, wash, and press the precipitate. Dissolve it in eight fl. ounces of alcohol, and add seventy-two grains of arsenious acid, heat together, and filter. The arsenite crystallizes on cooling. *Soubeiran.*

Di-arsenite of Quinia.

℞. Arsenious acid, ten grains.
Carbonate of potassium, five grs.
Distilled water, five fl. drachms.

Boil for half an hour, adding water to make up the loss by evaporation, so that each fl. drachm may contain two grains of arsenic. Add

Sulphate of quinia, two scruples,

previously dissolved in boiling water. Collect the precipitate on a filter, wash and dry it.

Dose, one-third of a grain, in chronic cutaneous affections. *Kingdon.*

QUINIÆ BISULPHAS.

BISULPHATE (ACID SULPHATE) OF QUINIA.

℞ Sulphate of quinia, one ounce.
Distilled water, twelve ounces.

Dissolve with the aid of diluted sulphuric acid, evaporate, and crystallize.

Used like the sulphate; it dissolves in rather less than ten parts of water.

QUINIÆ CITRAS.

CITRATE OF QUINIA.

℞ Quinia, two parts.
Distilled water, three parts.

Heat, and add sufficient citric acid to acidulate the mixture; when a perfect solution is effected, filter, and set aside to crystallize. *Magendie.*

The dose is the same as that of the sulphate; it is used in similar cases.

Syrup of Citrate of Quinia.

℞ Acid citrate of quinia, thirty-six grains.
Simple syrup, one pint.

Mix. Half fl. ounce to one fl. ounce, in the twenty-four hours. *Magendie.*

QUINIÆ ET FERRI CITRAS.

CITRATE OF QUINIA AND IRON.

(See *Ferri et Quiniæ Citras*, page 287.)

QUINIÆ FERROCYANAS.

FERROCYANATE OF QUINIA.

℞ Sulphate of quinia, one part.
Ferrocyanide of potassium, three parts.
Boiling distilled water, sufficient.

Dissolve the salts separately in the water, mix the solutions, boil for a few minutes, then let cool; separate the resin-like compound, and wash it with a little water. Dissolve it in boiling alcohol, and let crystallize. *Dorvault.*

Said to be more efficacious than any other salt of quinia. Dose, about the same as the sulphate.

Mixture of Ferrocyanate of Quinia.

℞ Ferrocyanate of quinia, four grs.
Alcohol, one fl. drachm.

Dissolve, and add

Camphor water, seven fl. drachms.

To be taken as required, shaking the vial. *Donovan.*

Pills of Ferrocyanate of Quinia.

℞ Ferrocyanate of quinia, twenty-four grains.
Mucilage of gum Arabic, sufficient.

Mix, and make twelve pills. Two for a dose. *Donovan.*

QUINIÆ HYDRIODAS.

HYDRIODATE OF QUINIA.

Iodide of Quinia.

℞ Add, by drops, a solution of twenty-four parts of iodide of potassium, in eight parts of water, to a strong solution of twenty parts of sulphate of quinia; wash the precipitate quickly, and dry in the shade. *Righini.*

In obstinate intermittents and scrofulous affections.

Bin-Iodide of Quinia.

℞ Sulphate of quinia, one part.

Dissolve in boiling water, and add

Iodide of potassium, two parts,

dissolved in water. Evaporate on a sand-bath to one-third, and allow the residue to cool; separate and preserve the resinous deposit.

Used in scrofulous enlargements of the glands. Dose, half a grain to one grain. *Kingdon.*

QUINIÆ ET FERRI IODIDUM.

IODIDE OF QUINIA AND IRON.

℞ Pour a strong solution of acid sulphate of quinia into a fresh solution of iodide of iron; collect the precipitate; dry by pressing between blotting paper, and keep it from the air. *Bouchardat.*

QUINIÆ HYDRIODAS IODURETA.

IODURETTED HYDRIODATE OF QUINIA.

℞ Add a solution of iodide of iron, containing a slight excess of

iodine, to an acid solution of quinia. Treat the precipitate with boiling alcohol, and filter whilst hot, and set aside to crystallize.

Bouchardat.

These preparations are useful where an alterative and tonic are required.

QUINIÆ ET HYDRARGYRI CHLORIDUM.

CHLORIDE OF QUINIA AND MERCURY.

℞ Corrosive sublimate, one part.
Muriate of quinia, three parts.

Dissolve separately in the smallest quantity of water; mix the solutions; collect the precipitate, and dry by a gentle heat.

McDermott.

Pills of Chloride of Quinia and Mercury.

℞ Double chloride of quinia and mercury, fifteen grains.
Opium, six grains.
Crumb of bread, sufficient.

Mix, and form thirty pills. One, three times a day, to produce salivation.

Hamilton.

QUINIÆ KINAS.

KINATE OF QUINIA.

℞ Alcoholic solution of sulphate of quinia, at will.
Aqueous solution of kinate of calcium, sufficient

to precipitate; filter, evaporate, redissolve, and crystallize. *Magendie.*

Pills of Kinate of Quinia.

℞ Kinate of quinia, } each,
Powdered black pepper, } one
Extract of wormwood, } drachm.

Mix, and make sixty pills. Three, every two or three hours, in obstinate intermittents. *Ronander.*

QUINIÆ LACTAS.

LACTATE OF QUINIA.

℞ Lactic acid, at will.
Quinia, sufficient

to saturate; leave the solution to evaporate spontaneously, in a shallow vessel, in a warm room, till crystals are formed.

Dose, three to ten grains. *Bouchardat.*

Pills of Lactate of Quinia.

℞ Lactate of quinia, half a drachm.
Extract of juniper, sufficient.

Mix, and make twenty pills. Two to six a day in intermittents. *Bouchardat.*

Mixture of Lactate of Quinia.

℞ Lactate of quinia, seven grains.
Mint water, five fl. drachms.
Syrup of cloves, one fl. ounce.
Water, three and a half fl. ounces.

Mix. To be taken in divided doses during the apyrexia of intermittents.

Bouchardat.

Syrup of Lactate of Quinia.

℞ Lactate of quinia, fifteen grains.
Dissolve in
Water, one fl. ounce.
Add
Sugar, two ounces.

Form syrup. A teaspoonful, in the intermittents of children. *Bouchardat.*

QUINIÆ MURIAS.

MURIATE OF QUINIA.

℞ Sulphate of quinia, one ounce and a half.
Chloride of barium, half an ounce.

Dissolve separately, in boiling distilled water; mix the solutions, filter, and evaporate to crystallization. *Guibourt.*

℞ Chloride of barium, five drachms.
Boiling water, one pint.

Dissolve, and gradually add

Sulphate of quinia, two ounces.

Boil for a few minutes, filter whilst hot, and dry the crystals. *Prus. Ph.* 1846.

℞ Diluted muriatic acid, at will
Quinia, sufficient

to saturate; evaporate, and crystallize. Dose, from half a grain to a grain.

Cottereau.

Mixture of Muriate of Quinia.

℞ Muriate of quinia, twelve grains.
Diluted muriatic acid, five minims.
Distilled water, seven fl. ounces.
Syrup of orange flowers, one fl. ounce.

Mix. Dose, one fluidounce. *Neligan.*

℞ Muriate of quinia, eight grains.
Fennel water, five fl. ounces.
Muriatic ether, one fl. drachm.
Sugar, half an ounce.

Mix. A tablespoonful every two hours.
Radius.

℞ Muriate of quinia, one scruple.
Peppermint water, half a fl. ounce.

Mix. Twenty to sixty drops, every two hours, in intermittents of children.
Radius.

QUINIÆ NITRAS.

Nitrate of Quinia.

℞ Diluted nitric acid, at will.
Quinia, sufficient

to saturate; boil with animal charcoal, filter, evaporate, and let crystallize. *Taddei.*

QUINIÆ PHOSPHAS.

Phosphate of Quinia.

℞ Quinia, two parts.
Water, three parts.

Boil, and add

Phosphoric acid, sufficient

to saturate; filter while hot, and let crystallize. *Turin Ph.*

QUINIÆ SULPHAS.

Sulphate of Quinia.

℞ Yellow bark, in coarse powder, forty-eight troyounces.
Muriatic acid, three fl. ounces and a half.
Lime, in powder, five troyounces.
Water, Sulphuric acid, Alcohol, Animal charcoal, each, sufficient.

Boil the bark in thirteen pints of water, with one-third of the muriatic acid, and strain through linen. Repeat this process twice. Mix the decoctions, and, whilst hot, gradually add the lime, mixed with two pints of water, stirring constantly, till the quinia is precipitated. Wash precipitate with distilled water, press, dry, and digest in boiling alcohol; decant, and repeat till alcohol is no longer rendered bitter. Mix the liquors, and distil off the alcohol, till a brown, viscid mass remains; add to this half a gallon of distilled water, heat to boiling, and add as much sulphuric acid as will dissolve the impure quinia; then add one ounce and a half of animal charcoal, boil for two minutes, filter while hot, and set aside to crystallize. If the solution be entirely neutral, acidulate slightly with sulphuric acid; if too acid, add more animal charcoal. Separate the crystals, dissolve them in boiling water a little acidulated with sulphuric acid, add a little animal charcoal, and recrystallize; place the crystals in bibulous paper, and dry by a gentle heat. Treat the mother-waters with solution of ammonia, and proceed with the precipitate as before.
U. S. Ph.

Powder of Sulphate of Quinia.

℞ Sulphate of quinia, three to twelve grains.
White sugar, two drachms.

Mix, and divide into six powders.
Radius.

Powder of Sulphate of Quinia and Tartar Emetic.

℞ Sulphate of quinia, ten grains.
Tartar emetic, three grains.

Mix, and divide into six powders. One, every two hours, in the apyrexia of obstinate intermittents. *Gola.*

Powder of Sulphate of Quinia and Soda.

℞ Sulphate of quinia, one to two grains.
Carbonate of sodium, four to five grains.
Sugar, one scruple.

Mix, and divide into six powders. One, morning and evening, in scrofulous ophthalmia. *Ammon.*

Powder of Sulphate of Quinia and Tartaric Acid.

℞ Tartaric acid, fifteen grains.
Sulphate of quinia, one grain and a half.

Mix, and add

Bicarbonate of sodium, eighteen grains.
Sugar, half a drachm.

Mix in water, for one dose. In the apyrexia of intermittents. *Meireu.*

Powder of Sulphate of Quinia and Morphia.

℞ Sulphate of quinia, two to six grains.
" morphia, half to one grain.

Mix, and divide into four powders.
Magendie.

Compound Powder of Sulphate of Quinia.

℞. Sulphate of quinia, half a grain.
Powdered foxglove,
a quarter to one grain.
Powdered fennel, six grains.
Sugar of milk, ten grains.

Mix. To be taken three or four times a day, in the hectic fever of phthisis.
Gunther.

℞. Sulphate of quinia, three grains.
Opium, one grain.
Gum Arabic,
Sugar, each, six grains.

Make a powder. To be taken just before the paroxysm of malignant intermittents.
Neumann.

℞. Sulphate of quinia, two grains.
" iron, one grain.
Powdered fennel, one scruple.
Oil of chamomile, one drop.

Mix. To be taken every three hours, in obstinate intermittents. *Phœbus.*

℞. Sulphate of quinia,
quarter of a grain.
Chocolate, seven grains.
Sugar of milk, two grains.

Mix. To be taken every three hours, in debility of the stomach. *Kopp.*

Pills of Sulphate of Quinia.

℞. Sulphate of quinia,
twenty-four grains.
Clarified honey,
inspissated, sufficient.

Mix, and divide into twenty-four pills.
U. S. Ph.

Each pill contains one grain of the sulphate.

℞. Sulphate of quinia, sixty grains.
Confection of hips, twenty grains.

Mix. Four grains contain three grains of the sulphate. *Brit. Ph.*

℞. Sulphate of quinia, fifteen grains.
Extract of chamomile, fifteen grs.

Mix, and make six pills. To be taken during the apyrexia of intermittent fevers.
Elliotson.

℞. Sulphate of quinia, twelve grains.
Powdered tragacanth, one grain.

Rub together, add sufficient water to form a plastic mass, and divide into six pills.
E. Parrish.

℞. Sulphate of quinia, twenty grains.
Elixir of vitriol, fifteen drops.

Drop the acid into the sulphate, and rub with a spatula until the mass assumes a pilular consistence. Make six pills.
E. Parrish.

Pills of Sulphate of Quinia and Gentian.

℞. Sulphate of quinia, one scruple.
Extract of gentian, two scruples.

Mix, and make twenty pills.

Pills of Sulphate of Quinia and Rhubarb.

℞. Sulphate of quinia, ten grains.
Powdered rhubarb, twenty grains.

Make ten pills. One thrice daily, in urticaria. *Waring.*

Compound Pills of Sulphate of Quinia.

℞. Calomel, six grains.
Powdered opium, three grains.
Sulphate of quinia, twelve grains.
Syrup, sufficient.

Beat into mass, and divide into twelve pills. One, night and morning, as an alterative.
Ellis.

℞. Blue pill mass, } each, twelve
Sulphate of quinia, } grains.
Powdered aloes, }
Aromatic syrup of
rhubarb, sufficient.

Beat into mass, and divide into twelve pills. One, three or four times a day. This, or the foregoing combination, is suited to the condition following bilious remittent or intermittent fevers. *Ellis.*

℞. Sulphate of quinia, twelve grains.
Extract of gentian, one scruple.
Compound rhubarb
pill, two scruples.
Blue pill mass, six pills.

Mix, and make twelve pills. One, three times a day. *Ryan.*

℞. Sulphate of quinia,
ten to fifteen grains.
Dry phosphoric acid, two scruples.
Powdered mallow root,
four scruples.
Extract of centaury, sufficient.

Mix, and make sixty pills. Three or four pills two or three times a day, in nervous debility with tendency to abortion.
Radius.

℞. Powdered camphor, one scruple.
Sulphate of quinia, two scruples.
Pill of aloes and
myrrh, one drachm and a half.
Syrup of ginger, sufficient.
Mix, and make forty pills. One, twice a day. *Copland.*

Syrup of Quinia.

℞. Sulphate of quinia, eight grains.
Distilled water, one fl. drachm.
Aromatic sulphuric
acid, six drops.
Dissolve, and add to
Syrup, twenty-five drachms.
Paris Codex.

℞. Sulphate of quinia,
sixteen grains.
Syrup of ginger, two fl. ounces.
Mix. Dose, a teaspoonful. *Ellis.*

Syrup of Quinia and Coffee.

℞. Ground roasted coffee, four ounces.
Boiling water,
two pints, four fl. ounces.
Make an infusion, let cool, and add
Sugar, four pounds.
Dissolve by means of a water-bath, and add
Sulphate of quinia, one drachm,
dissolved in a little water, acidulated with sulphuric acid. *Bories.*

Mixture of Sulphate of Quinia.

℞. Sulphate of quinia, twenty grains.
Sulphuric acid, one drop.
White sugar, one drachm.
Cinnamon water, two fl. ounces
and a half.
Mix. A teaspoonful every hour, in the apyrexia of intermittents. *Ellis.*

℞. Sulphate of quinia, fifteen grains.
Tartaric acid, twenty grains.
Distilled water, four troyounces.
Mint syrup, two troyounces.
Dissolve. *Righini.*

Mixture of Sulphate of Quinia and Coffee.

℞. Strong infusion of coffee,
five fl. ounces.
Sulphate of quinia, twenty-four
grains.
Sugar, four drachms.
Mix. Dose, a tablespoonful. The coffee conceals the bitterness of the quinia.
Beasley.

Tincture of Quinia.

℞. Sulphate of quinia, one scruple.
Alcohol, half a fl. ounce.
Dissolve. Dose, ten to twenty drops.
Ellis.

Compound Tincture of Quinia.

℞. Sulphate of quinia, eighty grains.
Tincture of orange-peel,
ten fl. ounces.
Dissolve. A fl. drachm contains one grain of the sulphate. *Brit. Ph.*

℞. Sulphate of quinia,
forty-eight grains.
Compound tincture of orange-
peel, five and a half fl. ounces.
Elixir of vitriol, forty-five drops.
Mix. Dose, half a fl. drachm to two fl. drachms. *Copland.*

Wine of Quinia.

℞. Sulphate of quinia, twelve grains.
Madeira wine, two pints.
Dissolve. Dose, one to two fl. ounces.
Magendie.

Aromatic Wine of Quinia.

℞. Sulphate of quinia, twenty grains.
Citric acid, thirty grains.
Orange wine, twenty fl. ounces.
Dissolve. *Brit. Ph.*
A fl. ounce contains one grain of the sulphate.

Liniment of Sulphate of Quinia.

℞. Sulphate of quinia, half a drachm.
Tartar emetic, six grains.
Extract of opium, twelve grains.
Spirit of camphor,
eighteen fl. drachms.
Mix. Three fl. drachms to be rubbed on the epigastrium, three times a day, in intermittents. *Schuster.*

Ointment of Sulphate of Quinia.

℞. Sulphate of quinia, one ounce.
Alcohol,
Sulphuric acid, each, sufficient to dissolve.

Lard, four ounces.

Rub together. Half an ounce to be rubbed into the groins, in malignant intermittents. *Antonini.*

Plaster of Sulphate of Quinia.

℞ Lead plaster, six drachms.
Resin, two drachms.

Melt together, and add

Sulphate of quinia, one drachm.
Oil of cajeput,
Camphor, each, one scruple.

Mix. To be applied to the epigastrium as a prophylactic in cholera. *Ammon.*

Enema of Sulphate of Quinia.

℞ Sulphate of quinia, twelve to twenty grains.
Flaxseed tea, four fl. ounces.

Mix. To be used every four to six hours. *Ellis.*

Dentifrice of Sulphate of Quinia.

℞ Sulphate of quinia, four grains.
Prepared coral, one ounce.
Carmine lake, eight grains.
Essence of myrrh, two drops.

Mix. *Pelletier.*

Gargle of Sulphate of Quinia.

℞ Sulphate of quinia, twelve grains.
" copper, sixteen grains.
Elixir of vitriol, one fl. drachm.
Water, eight fl. ounces.

Mix. To be used three or four times a day, in obstinate sore throat. *Hartshorne.*

QUINIÆ SULPHO-TARTRAS.

Sulpho-Tartrate of Quinia.

℞ Sulphate of quinia, four drachms.
Tartaric acid, four drachms and a half.
Distilled water, two fl. ounces.

Dissolve. Half a fl. drachm to a drachm, in the course of the day. *Righini.*

Mixture of Sulpho-Tartrate of Quinia.

℞ Sulphate of quinia, six grains.
Tartaric acid, three grains.
Syrup, one fl. ounce.

Mix. Dose, a teaspoonful. *Casorati.*

QUINIÆ TANNAS.

Tannate of Quinia.

℞ Sulphate of quinia, one part.
Water, thirty parts.
Diluted sulphuric acid, sufficient.

Dissolve, filter, and add solution of

Tannic acid, three parts.
Cold water, thirty parts.

Set aside in a cool place, then collect on a filter, wash and dry at a moderate heat. *Ph. Germ.*

Found useful in intermittent neuralgia.

Impure Tannate of Quinia.

℞ Powdered Peruvian bark, one part.
Vinegar, six parts.

Macerate for twenty-four hours; then boil, and decant. Repeat the process with fresh vinegar. Mix the decoctions, filter when cold, and add infusion of galls as long as precipitation takes place. Collect, wash, and dry the precipitate.

Dose, similar to that of the sulphate. *Buchner.*

QUINIÆ TARTRAS.

Tartrate of Quinia.

℞ Quinia, two parts.
Water, three parts.

Mix, boil, and add

Tartaric acid, sufficient

to dissolve the quinia. Filter whilst hot, and let crystallize. *Dorvault.*

QUINIÆ VALERIANAS.

Valerianate of Quinia.

℞ Valerianic acid, half a troyounce.
Sulphate of quinia, two troyounces.
Dilute sulphuric acid, } each,
Water of ammonia, } each,
Water, sufficient.

Dissolve the quinia in a pint of water with sufficient of the acid, precipitate by ammonia, wash well to remove all sulphate of ammonium. Dissolve the valerianic acid in five pints of water, heat to 180°, add the quinia, and when dissolved, crystallize; drain and dry the crystals, and evaporate the mother-water for further crystallization. *U. S. Ph.*

This may also be prepared by double decomposition, between the muriate of quinia and the valerianate of sodium.

Said to be more powerful than the sul-

phate, and not to cause nervous symptoms. It is given in solution, pill, enema, etc.

Pills of Valerianate of Quinia.

℞. Valerianate of quinia, twelve grs.
Powdered tragacanth, six grains.
Water, sufficient.

Rub together, and divide into eight pills. Dose, one pill every hour, in hemicrania. *Thomas.*

R.

RANUNCULUS.

Crowfoot.

Ranunculus bulbosus is indigenous to Europe, and has been extensively naturalized in this country; the whole plant is officinal.

Sex. Syst. Polyand. polygyn. *Nat. Syst.* Ranunculaceæ.

The stem is bulbous at its base, hairy, with ternately divided leaves and bright yellow flowers; the plant is inodorous and has, when fresh, a strongly acrid taste. Other species, like *R. acris, sceleratus*, etc., have been used, but the above is the only officinal one. Externally applied in the fresh state, it acts as a rubefacient, and it has been administered in asthma, dysuria, rheumatism, etc. By drying, the plant becomes almost inert.

RESINA.

Resin.

Resin, or, as it is generally called, *Rosin*, is the residuum after the distillation of the volatile oil from various species of the Pine tribe. In this state it is *Yellow resin*, or *Colophony*, which, when melted and agitated with water, becomes of a whitish color, and forms *White resin*. Resin, when pure, is yellowish-brown, inclining to olive or brown; it is solid, brittle, of a smooth and shining fracture; of faint odor, and a somewhat acrid taste. It is principally used in medicine as an ingredient in plasters and ointments.

Hæmostatic Powder.

℞. Powdered resin, four parts.
" gum Arabic,
" catechu, each, one part.

Mix. As an application to check external bleeding. *Paris Codex.*

℞. Resin, Gum Arabic, Charcoal, } equal parts.

Pulverize well, and mix. Has proved useful in checking bleeding from wounds, etc. *Bonafoux.*

Resin Cerate, or Basilicon Ointment.

℞. Resin, ten troyounces.
Lard, sixteen troyounces.
Yellow wax, four troyounces.

Melt together; strain through linen; and stir till cool. *U. S. Ph.*

As a stimulant application to blistered surfaces, burns, ulcers, etc.

Compound Resin Cerate.

℞. Resin, Suet, Yellow wax, } each, twelve troyounces.
Turpentine, six troyounces.
Flaxseed oil, seven troyounces.

Melt together; strain through linen, and stir till cold. *U. S. Ph.*

Known as *Deshler's Salve;* is rather more stimulating than the last.

℞. Common olive oil, six parts.
Yellow wax, Resin, Suet, } each, two parts.
Common turpentine, one part.

Melt, strain, and stir till cold.

This is the basilicon ointment of *Ph. Germ.*

Resin, or Adhesive Plaster.

℞. Powdered resin, half a pound.
Lead plaster, three pounds.

Melt the plaster by a gentle heat, and add the resin, mixing well. *U. S. Ph.*

℞. Resin, two ounces.
Lead plaster, sixteen ounces.
Hard soap, one ounce.

Liquefy the soap, add to the melted resin and plaster, and mix well. *Brit. Ph.*

Plaster of St. Andrew.

℞. White resin, eight ounces.
Elemi, two ounces.

Venice turpentine,
Oil of bay laurel, each, one ounce.

Melt together, and strain. An adhesive plaster. *Paris Codex.*

Plaster of Vigo with Mercury.

℞. Lead plaster, two pounds, eight ounces.
Yellow wax,
Resin, each, two ounces.
Ammoniac, Bdellium, Olibanum, Myrrh, each, five drachms.
Saffron, three drachms.
Turpentine, two ounces.
Liquid storax, six ounces.
Mercury, twelve ounces.
Oil of lavender, two drachms.

Powder the gum-resins and saffron, and rub the mercury with the storax and turpentine, in an iron mortar, until globules disappear. Melt the plaster with the wax and resin, and add the powders and the oil of lavender. When cool, add the mercurial mixture and incorporate thoroughly. *Paris Codex.*

Used to prevent pitting in smallpox, by spreading it on linen or leather, and covering the exposed part.

Resin Paper.

℞. Black pitch,
Turpentine, each, six parts.
Yellow wax, four parts.
Resin, ten parts.

Melt together, strain, and spread upon paper. *Ph. Germ.*

This is the *antirheumatic paper*, a popular remedy in some parts of Europe.

RHAMNUS.

Buckthorn.

The berries and juice of the *R. catharticus*, are possessed of active purgative properties. This plant is a native of Europe, and is occasionally met with in this country. European practitioners hold it in high esteem.

Sex. Syst. Pentand. monog. *Nat. Syst.* Rhamnaceæ.

Linn. Sp. Pl. 279. Griffith, Med. Bot. 217.

Sometimes the berries are used, at others, their expressed juice. Dose of the dried berries one drachm.

Extract of Buckthorn.

℞. Expressed juice of buckthorn berries, at will.

Permit the juice to undergo a slight fermentation, and then evaporate to the proper consistence. Dose, one scruple. *Beasley.*

Syrup of Buckthorn.

℞. Juice of buckthorn berries, four pints (imp.).
Sliced ginger,
Bruised pimento,
each, three-fourths of one ounce.
Sugar, five pounds.
Alcohol, six fl. ounces.

Evaporate the juice to two pints and a half. Add the ginger and pimento, digest four hours with a gentle heat, and strain. When cold add the spirit, after two days decant the clear liquid, and dissolve the sugar so as to make the specific gravity 1.32. *Brit. Ph.*

Dose, one fl. drachm.

RHEUM.

Rhubarb.

Rhubarb is the root of various species of *Rheum*, which grow in the deserts of Tartary, and in the central parts of Asia. Chinese rhubarb is probably obtained from *Rh. officinale.* Several other species are cultivated in England, France, and Germany, yielding the *European variety* of rhubarb.

Sex. Syst. Enneand. trigyn. *Nat. Syst.* Polygonaceæ.

Lind. Fl. Med. 358. Griffith, Med. Bot. 539.

Three kinds of Rhubarb were formerly found in commerce, the Russian or Turkey, the European, and the Chinese; the first of which is no longer obtainable, but the last is now altogether used, and, when good, it answers every purpose. All are purgatives, with some tonic and astringent powers, and are much used in various forms of disease. The dose, in substance, to produce a full effect, is from twenty to thirty grains. They are given in a vast variety of forms.

Powder of Rhubarb and Magnesia.

℞. Powdered rhubarb, one scruple.
Magnesia, ten grains.

Mix. To be given in syrup, or sugar and water. *Ellis.*

Powder of Rhubarb and Chalk.

℞. Powdered rhubarb, fifteen grains.
Compound chalk powder, twenty-four grains.

Mix. In the evening, in cardialgia. *Foy.*

Powder of Rhubarb and Sulphate of Potassium.

℞. Powdered rhubarb, one drachm.
" sulphate of potassium, two drachms.

Mix. Ten grains to a drachm, every morning. *Fordyce.*

Compound Powders of Rhubarb.

℞. Magnesia, Cream of tartar, Powdered rhubarb, " chamomile, Oleo-sacch. of fennel, each, half an ounce.

Mix. A tablespoonful, twice or thrice a day, in obstructions of the abdominal viscera. *Selle.*

℞. Powdered rhubarb, thirty grains.
" sulphate of potassium,
" chamomile,
each, one drachm.

Mix, and divide into six powders. One, twice a day, in dyspepsia with torpor of the bowels. *Ellis.*

℞. Powdered rhubarb, two ounces.
Magnesia, six ounces.
Powdered ginger, one ounce.

Mix well, and keep in well-closed bottles. *U. S. Ph.* and *Brit. Ph.*

A good antacid laxative. Dose, five grains to a drachm, according to age.

Roasted Rhubarb.

℞. Coarsely-powdered rhubarb, at will.

Place it in a shallow iron dish, heat regularly, so as to brown the powder, which should be so constantly stirred that the influence of the heat should be uniform throughout; when the color has changed to brown, the process is to be stopped, and the rhubarb reduced to fine powder, for use. *W. Procter.*

℞. Powdered rhubarb, at will.

Heat in an iron vessel, constantly stirring, till it becomes almost black, then smother it in a covered jar. Dose, five to ten grains, as an astringent in diarrhœa. *Hoblyn.*

Pills of Rhubarb.

℞. Powdered rhubarb, seventy-two grains.
Soap, in powder, twenty-four grains.

Beat them with water, so as to form a mass, and divide into twenty-four pills. *U. S. Ph.*

Each pill contains three grains of rhubarb.

Compound Rhubarb Pills.

℞. Powdered rhubarb, forty-eight grains.
" aloes, thirty-six grains.
" myrrh, twenty-four grains.
Oil of peppermint, three minims.
Water, sufficient.

Beat together into mass, and divide into twenty-four pills. *U. S. Ph.*

The pills of *Brit. Ph.* also contain soap equal in weight to myrrh.

A warm, tonic laxative, useful in costiveness with debility of the stomach. Dose, two to four a day.

℞. Powdered rhubarb, one drachm and a half.
Sulphate of iron, half a drachm.
Soap, two scruples.
Distilled water, sufficient.

Beat into mass, and divide into forty pills. In similar cases as last, three or four to be taken at bedtime. *Griffitts.*

Pills of Rhubarb and Ipecacuanha.

℞. Powdered rhubarb, one scruple.
" ipecacuanha, ten grains.
Opium, three grains.
Oil of cinnamon, five drops.
Gum Arabic, sufficient.

Triturate together, and divide into ten pills. One to be given every two or three hours, in dysentery, to relieve tormina and tenesmus. *Chapman.*

Pills of Rhubarb and Caraway.

℞. Powdered rhubarb, two drachms.
Syrup, one fl. drachm.
Oil of caraway, ten minims.

Mix, and divide into forty pills. *Kitchener.*

Pills of Rhubarb and Chamomile.

℞. Powdered rhubarb, " aloes, " myrrh, Extract of chamomile, each, one drachm.
Oil of chamomile, twelve drops.

Mix, and divide into sixty pills. These are known as *Speediman's pills.* *Beasley.*

℞. Powdered rhubarb,
" ginger,
each, half a drachm.
Extract of chamomile, one drachm.

Beat together, and divide into thirty pills; three to be taken before each meal. Have been recommended in dyspepsia and chlorosis. *A. T. Thomson.*

Griffitts' Pills.

℞. Powdered rhubarb,
one drachm and a half.
Sulphate of iron, half a drachm.
Soap, two scruples.
Water, sufficient

to form mass. Divide into forty pills.

A favorite remedy with the late Dr. S. P. Griffitts, to remove costiveness and impart tone to the bowels. Three or four, to be taken at bedtime.

Pills of Rhubarb and Iron.

℞. Dried sulphate of iron, four parts.
Extract of rhubarb, ten parts.
Conserve of red roses, five parts.

Beat into a mass, and divide into five-grain pills. Dose, two pills, as a tonic and laxative. *Ed. Ph.*

Pills of Rhubarb and Soda.

℞. Powdered rhubarb, Carbonate of sodium, Extract of gentian, each, one drachm and a half.

Mix, and make sixty pills. *Guy's Hosp.*

℞. Powdered rhubarb,
Dried carbonate of sodium,
Extract of gentian,
each, one scruple.
Calomel, three grains.

Mix, and make twenty pills. Two, occasionally, in dyspepsia. *Ellis.*

Pills of Rhubarb and Ox Gall.

℞. Inspissated ox gall, Ammoniac, Powdered rhubarb, equal parts.

Mix, and form pills of two grains each. *Leipsic Ph.*

In constipation, deficiency of bile, etc.

Lozenges of Rhubarb.

℞. Powdered rhubarb,
Cream of tartar,
each, two drachms.
Fresh orange-peel, half a drachm.
Sugar, dissolved in orange-flower water, four ounces.

Mix, and make lozenges of eighteen grains. *Béral.*

Suppository of Rhubarb.

℞. Extract of rhubarb, half a drachm.
Soap, three drachms.
Powdered rhubarb, sufficient.

Mix, and make three suppositories. *Radius.*

Electuary of Rhubarb.

℞. Powdered rhubarb,
one drachm and a half.
Sulphate of potassium,
one drachm.
Cream of tartar, half an ounce.
Pulp of tamarinds, two ounces.

Mix. A teaspoonful. *Saunders.*

Infusion of Rhubarb.

℞. Bruised rhubarb, two drachms.
Boiling water, half a pint.

Infuse for two hours, and strain. *U. S. Ph.*

The infusion of *Brit. Ph.* is about one-fourth weaker than this.

Compound Infusion of Rhubarb.

℞. Rhubarb,
Liquorice root,
each, half an ounce.
Aloes, one drachm.
Compound spirit of lavender, half a fl. drachm.
Lime water, eight fl. ounces.

Infuse for twelve hours, and strain. Dose, two tablespoonfuls two or three times a day, in dyspepsia. *Todd.*

One or two fl. ounces, every three or four hours, till it operates.

Alkaline Infusion of Rhubarb.

℞. Bruised rhubarb, two drachms.
Carbonate of potassium,
one drachm.
Boiling water, half a pint.

Infuse for four hours, strain, and add
Tincture of cinnamon,
half a fl. ounce.
Copland.

Extract of Rhubarb.

℞. Rhubarb, in powder,
No. 50, twelve troyounces.

Exhaust by displacement, using first one pint of alcohol and afterwards diluted alcohol. Evaporate the twelve fl. ounces first obtained, spontaneously to six fl. ounces; evaporate the remaining tincture in a water-bath at or below 160° to a syrupy consistence, mix with the other portion, and evaporate to the proper consistence. *U. S. Ph.*

Ph. Germ. exhausts rhubarb with diluted alcohol; *Brit. Ph.* with a mixture of one measure of alcohol to ten measures of water; *Paris Codex* with cold water only.

Dose, five to twenty grains.

Compound Extract of Rhubarb.

℞. Extract of rhubarb, three parts.
" aloes, one part.
Distilled water, four parts.

Soften by a moderate heat, and add a solution of

Jalap soap, one part.
Alcohol, sp. gr. 892, four parts.

Mix, and evaporate to dryness. Dose, two to ten grains. *Ph. Germ.*

Fluid Extract of Rhubarb.

℞. Rhubarb, in powder,
No. 50, sixteen troyounces.
Alcohol, fourteen fl. ounces.
Glycerin, two fl. ounces.

Mix the liquids, moisten the powder with four fl. ounces of the mixture, pack in a percolator, add the remaining mixture, and macerate for four days. Then with a mixture of two parts of alcohol and one of water, displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remaining tincture to two fl. ounces and mix with reserved portion. *U. S. Ph.*

Dose, ten to thirty minims.

Fluid Extract of Rhubarb and Senna.

℞. Fluid extract of senna,
twelve fl. ounces.
" " rhubarb,
four fl. ounces.
Bicarbonate of potassium,
half an ounce.
Tincture of ginger, one fl. ounce.
Oil of cloves, eight minims.
" anise, sixteen minims.

Dissolve the bicarbonate in the fluid extracts, add the tincture containing the oils, and mix. Dose, a teaspoonful.

W. Procter, Jr.

Confection of Rhubarb.

℞. Powdered rhubarb,
Cream of tartar, each,
two drachms.
Pulp of prunes, eight troyounces.
Syrup of quinces, sufficient.

Mix, and make a soft electuary. Dose, a dessertspoonful. *St. Marie.*

Syrup of Rhubarb.

℞. Fluid extract of rhubarb,
three fl. ounces.
Syrup, twenty-nine fl. ounces.

Mix thoroughly. *U. S. Ph.*

℞. Coarsely-powdered rhubarb,
Coarsely-powdered coriander,
each, two ounces.
Alcohol, eight fl. ounces.
Water, twenty-four fl. ounces.
Sugar, twenty-four ounces.

Displace the mixed powders with the mixed liquids, evaporate the resulting tincture to thirteen fl. ounces, add the sugar, and make a syrup. *Brit. Ph.*

℞. Cut rhubarb, twelve parts.
Bruised cinnamon, three parts.
Carbonate of potassium, one part.
Distilled water, one hundred parts.

Macerate over night, strain, filter, and to eighty parts of the filtrate add

Sugar, one hundred and forty-four parts.

Dissolve. This syrup has a fine brown-red color. *Ph. Germ.*

Mild cathartic. Dose, for young children, one to two fl. drachms.

Aromatic Syrup of Rhubarb.

℞. Rhubarb, in powder,
No. 50, two troyounces and a half.
Cloves, in powder, No. 50,
Cinnamon, in powder,
No. 60, each, half a troyounce.
Nutmeg, in powder,
No. 50, two drachms.
Diluted alcohol, sufficient.

Obtain by displacement one pint of tincture, and add to

Syrup, six pints,

previously heated. *U. S. Ph.*

A warm laxative in cases of children.

Dose, one fl. drachm in bowel complaints, to be repeated every two hours.

Syrup of Rhubarb and Senna.

℞. Bruised rhubarb, one ounce.
Senna, two ounces.
Fennel seed,
Bruised cinnamon,
each, two drachms.
Boiling water, two pints and a half.

Macerate for twelve hours, strain, and add

Sugar, three pounds.

Make syrup. *Ed. Ph.* 1744.

Tincture of Rhubarb.

℞. Rhubarb, in powder,
No. 40, three troyounces.
Cardamom, in powder,
No. 40, half a troyounce.
Diluted alcohol, sufficient.

Obtain by percolation, two pints. *U. S. Ph.*

To prevent precipitation of the tincture, Mr. J. B. Moore suggests for the above powders the following menstruum:—

Glycerin, four fl. ounces and a quarter.
Stronger alcohol, seventeen fl. ounces.
Water, twelve fl. ounces and six fl. drachms.

The percolation is completed with diluted alcohol.

The tincture of *Brit. Ph.* is of about the same strength, but the aromatics used are equal weights of cardamom seed, coriander, and saffron.

Dose, as purgative, half to one fl. ounce; as stomachic and tonic, one to two fluidrachms.

Tincture of Rhubarb and Gentian.

℞. Rhubarb, bruised, two ounces.
Gentian, bruised, half an ounce.
Diluted alcohol, two pints.

U. S. Ph. 1850.

Macerate for fourteen days, express, and filter. In flatulent colic, etc. Dose, as above.

℞. Rhubarb, bruised, two ounces.
Gentian, bruised, half an ounce.
Virginia snakeroot,
one drachm and a half.
Diluted alcohol, two pints.

Macerate for three days, express, and filter. *Van Mons.*

Tincture of Rhubarb and Aloes.

℞. Rhubarb, bruised, ten drachms.
Aloes, powdered, six drachms.
Cardamom, bruised, half an ounce.
Diluted alcohol, two pints.

Macerate for fourteen days, express, and filter. *U. S. Ph.* 1850.

This was formerly known as *Elixir sacrum*, and was much used.

Tincture of Rhubarb and Senna.

℞. Rhubarb, in powder,
No. 40, one troyounce.
Senna, in powder,
No. 40, two drachms.
Coriander, in powder,
No. 40,
Fennel, in powder,
No. 40, each, one drachm.
Liquorice, in powder,
No. 40, half a drachm.
Raisins, stoned, six troyounces.
Diluted alcohol, three pints.

Macerate for fourteen days, express, and filter. *U. S. Ph.*

Well known and much used under the name of *Warner's gout cordial*, as a stomachic and slight purgative. Dose, from a half to one fl. ounce.

Warner's Cordial.

℞. Contused rhubarb, one ounce.
Senna, half an ounce.
Saffron, one drachm.
Fennel,
Coriander, each, two drachms.
Liquorice, four drachms.
Raisins, stoned, one pound.
Brandy, three pints.

Mix, and macerate for a week, and strain. Dose, half a wineglassful, in atonic gout with flatulence. *Chapman.*

Tincture of Rhubarb and Orange-Peel.

℞. Rhubarb, one ounce.
Orange-peel,
Hiera picra, each, two ounces.
French brandy, four pints.

Macerate, and strain. Dose, a tablespoonful night and morning, in gout. *Graves.*

Tincture of Rhubarb and Anise.

℞. Rhubarb, bruised,
Liquorice root, bruised,
each, two ounces.

Anise, bruised,
Sugar, each, one ounce.
Diluted alcohol, two pints.

Macerate for fourteen days, express, and filter. *Copland.*

Used as the above tincture.

Sweet Tincture of Rhubarb.

℞. Coarsely powdered rhubarb, eight ounces.
Powdered liquorice root, three ounces.
Bruised anise, three ounces.
" cardamom, half an ounce.
" orange-peel, one ounce.
Diluted alcohol, sufficient

to make one gallon of tincture, by displacement.

Dose, a tablespoonful. *A. B. Taylor.*

℞. Bruised rhubarb, one ounce and a half.
" liquorice root,
" anise, each, six drachms.
Sugar, one ounce and a half.
Diluted alcohol, two pints.

Macerate for two weeks, and filter. Or prepare the tincture by displacement. *D. S. Jones.*

Aqueous (Alkaline) Tincture of Rhubarb.

℞. Rhubarb, cut, ten parts.
Powdered borax,
Carbonate of potassium, each, one part.
Boiling water, eighty-five parts.

Macerate for fifteen minutes; add

Alcohol, ten parts.

Macerate, express slightly, strain, and add

Cinnamon water, fifteen parts. *Ph. Germ.*

A mild purgative, where there is acidity of stomach, in doses of one-half to two fl. ounces.

Wine of Rhubarb.

℞. Rhubarb, in powder, No. 40, two troyounces.
Canella, in powder, No. 40, one drachm.
Diluted alcohol, two fl. ounces.
Sherry wine, fourteen fl. ounces.

Displace the mixed powders with the mixed liquids, and afterwards with diluted alcohol until one pint has been obtained.

Brit. Ph. uses one ounce and a half (avoirdupois) of rhubarb to one pint (imp.) of the wine. *U. S. Ph.*

A warm, cordial laxative, in doses of one to four fl. drachms.

℞. Rhubarb, finely cut, eight parts.
Orange-peel, cut, two parts.
Cardamom, bruised, one part.
Sherry wine, one hundred parts.

Digest for a week, express, filter, and add

Powdered sugar, twelve parts.

Dissolve. Used like the preceding. *Ph. Germ.*

℞. Rhubarb, bruised, three parts.
Malaga wine, fifty pints.

Macerate for ten days, express, and filter. *Paris Codex.*

Used as the last.

Wine of Rhubarb and Gentian.

℞. Rhubarb, bruised, one ounce.
Gentian, bruised, two drachms.
Canella, bruised, one drachm.
Wine, one pint.

Macerate for three days, express, and filter. *Swed. Ph.*

Compound Wine of Rhubarb.

℞. Rhubarb, bruised,
Orange-peel, bruised, each, half an ounce.
Wine, two pints.

Macerate for twenty hours, strain, and add

Oleo-sacch. of mace, one ounce.
Hoffmann's anodyne, one drachm.

As a stomachic, a tablepoonful three times a day. *Phœbus.*

Rhubarb Mixture.

℞. Bruised rhubarb, one drachm.
" fennel, one scruple.
Sulphate of magnesium, half an ounce.
Manna, one ounce.
Boiling water, six fl. ounces.

Infuse and strain, when cold. As a mild purgative; one-half to be taken at a dose. *Radius.*

℞. Infusion of rhubarb, one fl. drachm and a half.
Spirit of ammonia, two fl. scruples.

Cinnamon water,
one fl. ounce and a half.
Syrup of opium, six fl. drachms.

Mix. A teaspoonful every two hours, in the chronic diarrhœa of young children. *Vogt.*

℞ Powdered rhubarb,
Carbonate of magnesium,
each, thirty grains.
Aromatic confection,
twenty grains.
Cinnamon water, nine fl. drachms.
Comp. tincture of
cardamom, one fl. drachm.

Mix. Advised in constipation of anæmic females. *Ashwell.*

℞ Powdered rhubarb, one drachm.
Carbonate of sodium,
two drachms.
Tincture of orange-
peel, one fl. ounce and a half.
Decoction of liquorice,
ten fl. ounces and a half.

Mix. Dose, half a fl. ounce to one fl. ounce three times a day. *Guy's Hosp.*

℞ Powdered rhubarb, one drachm.
Magnesia, one drachm and a half.
Powdered ginger, one scruple.
Peppermint water, one pint.

Mix. Dose, half a fl. ounce. *Gregory.*

℞ Powdered rhubarb, two scruples.
Tartrate of potassium, one ounce.
Peppermint water, six fl. ounces.
Tincture of senna,
Syrup of ginger,
each, half a fl. ounce.

Mix. Dose, one fl. ounce. *Brande.*

RHŒAS.

Red Poppy.

The *Papaver rhœas*, or Red Poppy, is a native of Europe, where it is found in great abundance in cultivated grounds, and has become naturalized in many places in this country.

Sex. Syst. Polyand. monog. *Nat. Syst.* Papaveraceæ.

Linn. Sp. Pl. 726. Woodville, Med. Bot. 387.

The parts used are the petals; these have a mucilaginous, somewhat bitter taste, and a narcotic smell, which latter is lost on drying. Their action on the system is slight; but they are used in Europe in the preparation of a syrup, prescribed as an anodyne in the catarrhal affections of children.

Syrup of Red Poppy.

℞ Red poppy petals,
thirteen ounces.
Water, twenty ounces.

Heat the water on a water-bath, gradually add the petals, remove from the fire, macerate for twelve hours, express, and strain; then add

Sugar, thirty-six ounces,

and make syrup. When nearly cold, add

Rectified spirit,
two and a half fl. ounces.

Its sp. gr. is 1.330. *Brit. Ph.*

The syrup of *Ph. Germ.* is almost identical with the foregoing, the main difference being that the infusion is strained without pressing the petals, and no alcohol is added to the syrup.

Dose, one to four fl. drachms.

Infusion of Red Poppy.

℞ Red poppy petals, one drachm.
Boiling water, one pint.

Infuse and strain. To be taken freely, in catarrhal affections. *Cottereau.*

Compound Infusion of Red Poppy.

℞ Red poppy petals, two ounces.
Diluted sulphuric acid,
fifteen drops.
Sugar, two ounces.
Decoction of barley, one pint.

Infuse, and strain. Used as above. *St. Marie.*

RHUS GLABRUM.

Sumach.

A shrub-like plant, indigenous in barren soil in this country, with oddly pinnate leaves, and densely villous fruit of a bright purple color, and a sour taste.

Sex. Syst. Dicœcia Pentand. *Nat. Syst.* Anacardiaceæ.

The bark and leaves contain a large amount of tannin; the acid taste of the berries is due to bimalate of calcium; the infusion of the latter is used as an astringent gargle in sore throat, and in mercurial sore mouth.

Fluid Extract of Sumach Berries.

℞ Sumach berries,
powdered, sixteen troyounces.
Sugar, six troyounces.
Diluted alcohol, sufficient.

Exhaust the powder with the diluted al-

cohol, reserve the first six fluidounces, evaporate the remaining tincture to six fluidounces, dissolve in this the sugar, and mix with reserved portion. *Procter.*

As an addition to gargles.

ROSA CANINA.

Dog Rose.

This shrub is a native of Europe, growing in hedges and thickets.

Sex. Syst. Icosand. polyg. *Nat. Syst.* Rosaceæ.

Linn. Sp. Pl. 704. Woodville, Med. Bot. 493.

The fruit, called hips, which is the officinal portion, is smooth, oval, red, and of a pleasant, acidulous taste. It is principally used in confection.

Confection of Dog Rose.

℞ Hips deprived of the seed-like akenes, one pound.
Sugar, two pounds.

Beat the hips to a pulp in a stone mortar, rub the pulp through a sieve, add the sugar and rub together till well mixed. *Brit. Ph.*

Has been advised in diarrhœa and dysentery, as an astringent; but is principally used as a pill basis.

ROSA CENTIFOLIA.

Hundred-Leaved Rose. Pale Rose.

This species, of which there are innumerable varieties, is cultivated in every garden, but its native country is unknown, though probably it is from Persia.

The petals are the only part used; these are fragrant, and have an acidulous, somewhat bitterish taste. They are slightly laxative, but are principally used for making rose water.

Rose Water.

℞ Fresh pale rose, forty-eight troyounces.
Water, sixteen pints.

Mix, and distil eight pints. *U. S. Ph.*

Brit. Ph. and *Paris Codex* obtain from one pound of the fresh petals one pound, *Ph. Germ.* five pounds of distillate.

℞ Oil of roses, twenty minims.
Distilled water (imp.), half a gallon.

Agitate together, and filter. *Dub. Ph.*

Ointment of Rose Water.

℞ Rose water, two fl. ounces.
Oil of almonds, three troyounces and a half.
Spermaceti, one troyounce.
White wax, two drachms.

Melt the last three ingredients together, on a water-bath, and stir in the rose water till cold. *U. S. Ph.*

Nearly identical with *unguentum leniens* of *Ph. Germ.*

℞ Oil of sweet almonds, two fl. ounces.
Spermaceti, six drachms.
Glycerin, four fl. drachms.
Oil of roses,
" bergamot, each, two drops.

Melt the spermaceti with a gentle heat, stir in the oil of almonds gradually, remove the mixture from the fire, stir constantly, adding the glycerin, and finally incorporate the volatile oils. *Jos. Laidley.*

Much used, under the name of *Cold cream*, as a cooling application to irritated surfaces.

℞ Lard, ten parts.
White wax, two parts.

Melt together, when nearly cold, add

Rose water, one part.

Mix thoroughly. *Ph. Germ.*

Rose Ointment.

℞ Lard, one thousand parts.
Alkanet, thirty parts.

Digest by a water-bath for one hour, strain, and add

White wax, eight parts

previously melted, stir, and when nearly cold, mix with

Oil of roses, two parts.

Paris Codex.

Rose Lozenges.

℞ Powdered sugar,
Rose water, each, six ounces.

Evaporate gently, to a thick syrup, and add

Coarsely-powdered sugar, one pound.
Oil of roses, one drachm and a half.

When dissolved, pour in drops on a cold, oiled, marble slab, and dry. *Cottereau.*

Collutory of Rose Water.

℞ Rose water, three fl. ounces.
Cream,
Whites of eggs,
Syrup of violets, } each, one fl. ounce.

Mix. *St. Marie.*

Oil of Roses.

℞ Fresh rose leaves, at will.
Water, sufficient

to moisten the leaves; distil, and collect the oil that floats on the product. *Guibourt.*

The attar of roses of commerce is made almost exclusively in Turkey and the Levant.

Essence of Roses.

℞ Pounded rose leaves,
Alcohol (.874), each, ten parts.

Infuse for twenty-four hours, by a gentle heat, and distil. *Taddei.*

Rose Oil.

℞ Pounded rose leaves, one part.
Olive oil, four parts.

Digest with gentle heat for four days, express, and strain; repeat process with fresh leaves, a second and third time; separate the water, and filter. *Soubeiran.*

As an application to chilblains and irritated surfaces.

ROSA GALLICA.

Red Rose.

This species is a native of the south of Europe, and is generally cultivated in our gardens. The varieties are very numerous. Linn. Sp. Pl. 704. Griffith, Med. Bot. 273.

The parts used in medicine are the petals of the unexpanded flowers, deprived of their white claws, and dried. In this state they are of a purplish-red color, of an agreeable odor, and bitterish, astringent taste. They have mild astringent properties, but are more used as a vehicle than for their own powers.

Confection of Roses.

℞ Red roses, in fine powder, four troyounces.
Powdered sugar, thirty troyounces.
Clarified honey, six troyounces.
Rose water, eight fl. ounces.

Rub the roses with the rose water, heated to 150°; add gradually the sugar and honey, and beat together. *U. S. Ph.*

℞ Fresh red rose petals, one pound.
Refined sugar, three pounds.

Beat the petals to a pulp in a stone mortar, add the sugar, and rub well together. *Brit. Ph.*

Principally used as a pill basis.

Compound (Acid) Infusion of Roses.

℞ Red rose, half a troyounce.
Boiling water, forty fl. ounces.
Diluted sulphuric acid, three fl. drachms.

Macerate in a glass vessel for half an hour; express, strain, and add

Sugar, one troyounce and a half.

As a cooling drink, mixed with water. *U. S. Ph.*

℞ Red rose, one quarter ounce.
Boiling water, ten fl. ounces.
Diluted sulphuric acid, one fl. drachm.

Infuse the roses, in a glass vessel, with the mixed liquids for half an hour, and strain. *Brit. Ph.*

Honey of Roses.

℞ Red rose, one part.
Clarified honey, ten parts.
Boiling water, six parts.

Macerate the roses in the water over night, express, and strain; add the honey, and evaporate to proper consistence. *Ph. Germ.*

℞ Red rose, in powder, No. 50, two troyounces.
Clarified honey, twenty-five troyounces.
Diluted alcohol, sufficient.

Percolate the powder with the alcohol, reserve the first six fl. drachms, evaporate the eight fl. ounces, obtained afterwards, by means of a water-bath to ten fl. drachms, and, together with the reserved percolate, mix with the honey. *U. S. Ph.*

As an addition to gargles.

Electuary of Roses.

℞ Confection of roses, sixteen parts.
Syrup of tolu, four parts.
" poppies, one part.

Mix. Used as an astringent in bowel affections, in doses of a teaspoonful. *Foy.*

Tincture of Roses.

R. Red roses, five ounces.
Alcohol, two fl. ounces.
Rose water, eight fl. ounces.

Digest for four days, express, and filter; digest residuum with half a pint of alcohol for three days; express, filter, and mix the liquors. *Squire.*

Used principally as a perfume.

Wine of Roses.

R. Red rose, one part.
Red wine, sixteen parts.

Infuse for half an hour, and strain. As an application to indolent ulcers. *Béral.*

Vinegar of Roses.

R. Red rose, one part.
White vinegar, twelve parts.

Macerate for ten days, express, and filter. *Paris Codex.*

Compound Vinegar of Roses.

R. Red rose, one ounce and a half.
Sumach leaves, one ounce.
Wine of quince, four fl. ounces.
Vinegar of red wine, ten fl. ounces.

Macerate for ten days, express, and filter. As an application to contusions, and as a styptic. *Van Mons.*

Syrup of Red Roses.

R. Red rose, in powder, No. 50, two troyounces.
Sugar, eighteen troyounces.

Obtain from the powder by displacement with diluted alcohol six fl. ounces of tincture, reserving the first fl. ounce, and evaporate the remaining five to one fl. ounce and a half; mix this with seven fl. ounces of water, dissolve the sugar, strain, and when nearly cold, mix with reserved tincture. *U. S. Ph.*

R. Red rose, two ounces.
Boiling water, twenty ounces.
Sugar, thirty ounces.

Macerate the rose leaves in the water for two hours, press, heat to boiling, filter, and dissolve the sugar. It weighs forty-six ounces, and has the sp. gr. 1.335. *Brit. Ph.*

Dose, one fl. drachm.

A very mild astringent, of a fine red color.

ROSMARINUS.

Rosemary.

This is the *Rosmarinus officinalis*, a small evergreen shrub, a native of the south of Europe, and generally cultivated in gardens elsewhere.

Sex. Syst. Diand. monog. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 23. Griffith, Med. Bot. 507.

The officinal portions are the leaves, and in some pharmacopœias, flowering extremities. These have a fragrant odor, and a bitter, pungent taste. Rosemary is stimulant and carminative, but is principally employed as an aromatic addition to lotions and liniments, and as an ingredient in articles of perfumery.

Aromatic Bath.

R. Rosemary, Thyme, Sage, Origanum, Mint, each, half a pound.
Boiling water, six pints.

Macerate for twelve hours, strain, and add

Essence of soap, four ounces.
Chloride of ammonium, two ounces.

Pour the whole into water sufficient for a bath. *Foy.*

In chronic rheumatism, cutaneous affections, dyspepsia, etc.

Aromatic Fomentation.

R. Rosemary, half an ounce.
Red wine,
Water, each, three fl. ounces.

Infuse and express. As a fomentation in contusions. *Augustin.*

Aromatic Vinegar.

R. Rosemary,
Sage, each, one ounce.
Lavender, one ounce and a half.
Cloves, half a drachm.
Vinegar, two pints.

Infuse for eight days, and strain. As a lotion in contusions, sprains, etc. *Spielmann.*

Compound Rosemary Ointment. (Nervine Ointment.)

R. Lard, sixteen parts.
Suet, eight parts.
Expressed oil of nutmegs,
Yellow wax, each, two parts.

Melt together, and when nearly cold, add

Oil of rosemary,
" juniper, each, one part.
Mix well. *Ph. Germ.*

Tincture of Rosemary.

℞. Rosemary, one part.
Spirit of rosemary, four parts.
Macerate, express, and filter. *Bruns. Ph.*

Oil of Rosemary.

℞. Rosemary, at will.
Water, sufficient
to cover. Distil, and collect the oil that floats on the product. Principally used in stimulating liniments, but sometimes given as carminative in doses of two or three drops. *U. S. Ph.*

Oleo-infusion of Rosemary.

℞. Rosemary, one part.
Olive oil, three parts.
Heat till the water has evaporated, express, and strain. As a stimulating application.
Span. Ph.

Spirit of Rosemary.

℞. Oil of rosemary, four drachms.
Alcohol, one gallon.
Dissolve the oil in the alcohol.
U. S. Ph. 1850.

Brit. Ph. directs to dissolve one fl. ounce of the oil in forty-nine fl. ounces of alcohol.

As an ingredient in lotions and liniments, etc.

℞. Rosemary leaves, bruised, one part.
Alcohol,
Water, each, three parts.
Macerate for a day, and distil four parts.
Ph. Germ.

Hungary Water.

℞. Rosemary, three parts.
Lavender, one part.
Diluted alcohol, six parts.
Water, twelve parts.
Mix, and distil three-fourths. Used as a perfume. *Van Mons.*

℞. Spirit of lavender, seven fl. ounces.
" rosemary, four fl. ounces.
Mix. Used as a substitute for the above.
Pereira.

℞. Fresh rosemary, in blossom, four pounds.
Fresh sage, in blossom, six ounces.
Ginger, two ounces.
Cut into pieces, and add
Alcohol, twelve pounds.
Water, two pints.
Distil eleven pints by a gentle heat.
Wirt. Ph.

ROTTLERA.

KAMALA.

This, which is also known by the names of *wurus* or *waras*, consists of the glandular hairs obtained from the fruit of *Rottlera tinctoria*, a small tree indigenous to the East Indies, southern Arabia, and Abyssinia.

Nat. Syst. Euphorbiaceæ.

Roxb. Corom. pl. 168.

It is a fine granular powder, of a brick-red color and almost inodorous and tasteless. Ether and alcohol dissolve the most of it. Incinerated, it should leave little over four per cent. of ashes. It possesses anthelmintic properties and purgative effects, and is mainly used in cases of tapeworm. Dose, one-half to two drachms, either in substance or tincture.

Tincture of Kamala.

℞. Kamala, three ounces.
Alcohol, ten fl. ounces.
Digest and filter. Dose, half a fluidounce, with some aromatic water.
T. Anderson.

RUBIA.

MADDER.

The *Rubia tinctorum*, or madder, is a perennial plant, a native of the south of Europe, and extensively cultivated in many countries for the sake of its roots, which are used in dying reds.

Sex. Syst. Tetrand. monog. *Nat. Syst.* Rubiaceæ.

Linn. Sp. Pl. 158. Griffith, Med. Bot. 382.

The root is the officinal portion, and, as found in commerce, is in long cylindrical pieces, about as thick as a quill, of a deep red or brown color. It has a peculiar and unpleasant odor, and a bitterish, astringent taste. It was much used formerly as a diuretic, but is at present seldom prescribed, except occasionally as an emmenagogue, for which purpose it is highly spoken of by many practitioners.

Compound Powder of Madder.

℞. Powdered madder,
" sugar,
each, two drachms.
" sulphate of potassium,
half an ounce.

Mix well. Dose, ten grains to a scruple, in rachitis. *Radius.*

Decoction of Madder.

℞. Powdered madder, one ounce.
Boiling water, one pint.

Simmer for fifteen minutes, and add

Bruised cloves, one drachm.

Strain when cool. A wineglasful every three hours, a short time previous to the expected time of the menstrual discharge. *Dewees.*

℞. Powdered madder, one ounce.
" mace, two drachms.
Water, one pint and a half.

Boil down to one pint, strain, and add

Aromatic tincture, two fl. drachms.
Syrup of citric acid, two fl. ounces.

Dose, three fl. ounces three or four times a day, in amenorrhœa, chlorosis, etc. *Swediaur.*

℞. Powdered madder, half an ounce.
" hops, one drachm.
English walnut leaves, three.
Water, two pints.

Boil down to a pint and a half, strain, and add

Tincture of tartrate of
iron, one fl. drachm.

Advised in scrofula, in doses of two ounces, night and morning. *St. Marie.*

RUBUS CANADENSIS.

Dewberry.

RUBUS VILLOSUS.

Blackberry.

These two species of shrubby plants are very common in the United States, and are well known for their pleasant fruit.

Sex. Syst. Icosand. polyg. *Nat. Syst.* Rosaceæ.

Torrey and Gray, i. 454, 455. Griffith, Med. Bot. 275, 276.

The juice of the fruit is employed in the form of a syrup. The officinal portion is the bark of the roots, which has a very faint odor, and a bitterish, astringent taste. It is an efficient but mild astringent, and has been found very useful in a relaxed condition of the bowels.

Decoction of Blackberry Root.

℞. Small roots of blackberry,
one ounce.
Water, one pint and a half.

Boil down to one pint, and strain. Dose, one or two fl. ounces, three or four times a day, in diarrhœa, etc.

Fluid Extract of Blackberry.

℞. Bark of blackberry root, in powder, No. 60, sixteen troyounces.
Alcohol, eight fl. ounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.

Mix the liquids, moisten the powder with four fl. ounces of the mixture, pack in a glass percolator, add the remaining mixture, and macerate for four days. Then, with diluted alcohol, displace twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, half to one fl. drachm.

Syrup of Blackberry.

℞. Fluid extract of blackberry,
half a pint.
Syrup, one pint and a half.

Mix. Dose, about a tablespoonful. *U. S. Ph.*

Syrup of Blackberries.

℞. Juice of blackberries,
twenty ounces.
Sugar, three pounds.

Boil, and strain. Said to be very useful in dysentery.

℞. Blackberries, thirty quarts.

Mash, strain through unbleached muslin, and express the remainder. Then heat in a proper vessel

Sugar, (av.) sixty-four pounds.
Water, two and one-quarter gallons.

Make a syrup, and stir in the blackberry juice, continuing the heat until the syrup has boiled two or three minutes. The syrup should mark 31° Baum. while boiling. Remove from the fire, skim, and strain. As this syrup is rather insipid, its flavor may be improved by adding aromatics. *Ambrose Smith.*

RUBUS IDÆUS.

Raspberry.

This is a European plant, cultivated in this country for its fruit, which is officinal in several European pharmacopœias.

Syrup of Raspberries.

℞. Raspberries, at will.

Bruise, set aside for three days, express the juice, let settle until perfectly limpid, and filter; then take of this

Clarified raspberry juice, five parts.
Sugar, nine parts.

Dissolve by heat. Other fruit syrups are made by the same process. *Ph. Germ.*

Vinegar of Raspberries.

℞. Raspberry syrup, one part.
Pure vinegar, two parts.

Mix. An agreeable cooling drink. *Ph. Germ.*

Raspberry Water.

℞. Press cake obtained in making raspberry syrup, one part.

Obtain by distillation with water two parts of distillate. *Ph. Germ.*

RUMEX.

Dock.

Various species of dock have been used at different times, but the *R. crispus* or yellow dock is alone officinal in this country.

Sex. Syst. Hexand. trigyn. *Nat. Syst.* Polygonaceæ.

Willd. Sp. Pl. ii. 250. Griffith, Med. Bot. 545.

All of the species of dock are cooling, aperient, and slightly diuretic, but they are seldom employed.

Decoction of Dock Root.

℞. Bruised yellow dock root, one ounce.
Boiling water, one pint.

Boil for fifteen minutes, and strain. This has proved efficacious in ichthyosis. Dose, one fl. ounce. *A. T. Thomson.*

RUTA

Rue.

The only species recognized in medicine is the *Ruta graveolens*, a small shrub with glaucous leaves and yellow flowers, a native of the south of Europe, but generally cultivated in gardens.

Sex. Syst. Decand. monog. *Nat. Syst.* Rutaceæ.

Linn. Sp. Pl. 523. Griffith, Med. Bot. 189.

The leaves are the part usually employed; they have a nauseous odor, and a bitter, acrid, disagreeable taste. They are stimulant and antispasmodic, and have been much used as an emmenagogue and vermifuge. The dose of the powder is from ten to twenty grains two or three times a day, of the volatile oil one or two drops.

Confection of Rue.

℞. Powdered rue, Caraway, Laurel berries, each, one ounce and a half.
Sagapenum, half an ounce.
Black pepper, two drachms.
Clarified honey, sixteen ounces.

Mix. *Lond. Ph.*

It is used as an antispasmodic, in the form of an enema made with a scruple to a drachm, mixed with half a pint of warm, mucilaginous fluid.

Extract of Rue.

℞. Dried rue, one part.
Alcohol (60 pr. ct.), six parts.

Exhaust the rue by the process of displacement, distil off the alcohol, and evaporate. *Paris Codex.*

Mixture of Rue and Squill.

℞. Juice of rue leaves, one ounce.
Oxymel of squill, half an ounce.

Mix. A teaspoonful occasionally, in hysteric affections. *Pierquin.*

Oleo-infusion of Rue.

℞. Dried rue, one part.
Olive oil, ten parts.

Digest for two hours on a water-bath, agitating from time to time, express, and filter. *Paris Codex.*

Syrup of Rue.

℞. Coarsely-powdered sugar, fifteen ounces.
Tincture of rue, two fl. ounces.
Distilled water, seven fl. ounces.

Dissolve, and strain. *Béral.*

Tincture of Rue.

℞. Expressed juice of rue,
Alcohol (.847), each, four fl. ounces.

Mix, and filter at the end of twenty-four hours. *Béral.*

Mixture of Rue.

R. Rue, Savine, Wormwood, each, three drachms.

Boiling water, one pint.

Infuse, strain, and add

Castor oil, half an ounce.

As an injection, in cases of ascarides. *Radius.*

S.

SABADILLA.

Cevadilla.

This article is the seed of one or more plants belonging to the natural order of Melanthaceæ; the *U. S. Ph.* attributes it to *Veratrum sabadilla*, and the *Brit. Ph.* to *Asagræa officinalis.*

The Cevadilla of the shops consists of follicles, seeds, etc. The first are ovate, oblong, acuminate, of a pale, yellowish-brown color, and a thin, papery consistence. The seeds are small, curved, acuminate, shining, wrinkled, and of a blackish-brown color. They have very little odor, but their taste is bitter and acrid. These seeds are a drastic emeto-cathartic, and have been used as an anthelmintic, and in nervous diseases, etc.; but are principally used in the preparation of veratria. The dose is from two to ten grains, in powder; but it should always be given with much caution.

Compound Powder of Cevadilla.

R. Powdered cevadilla, two grains.
Sulphate of iron, one grain.
Powdered santonica,
Magnesia, each, ten grains.

Mix. To be given four times a day, in cases of tenia. *Radius.*

Tincture of Cevadilla.

R. Seeds of cevadilla, bruised, at will.
Alcohol, sufficient

to cover them; digest for ten days, and filter. As a lotion in rheumatism. *Turnbull.*

Extract of Cevadilla.

R. Tincture of cevadilla, at will.

Evaporate to proper consistence. Dose, one-sixth of a grain, as a substitute for veratria in tic douloureux, etc. *Turnbull.*

Ointment of Cevadilla.

R. Powdered cevadilla, four ounces.
" mustard,
" pellitory, each, two ounces.
Lard, thirty-two ounces.

Mix well. To destroy lice. *Paris Codex.*

Ointment of Extract of Cevadilla.

R. Extract of cevadilla, fifteen to twenty grains.
Lard, one ounce.

Mix well. As a substitute for veratria ointment, but not as efficient. *Turnbull.*

Capuchin Powder.

R. Powdered cevadilla, stavesacre, parsley seed, tobacco, equal parts.

Mix. To destroy vermin in the hair. *Niemann.*

SABBATIA.

American Centaury.

The *Sabbatia angularis* is a small annual or biennial plant, growing in abundance in various parts of the United States, having numerous rose-colored flowers, which appear in July and August.

Sex. Syst. Pentand. monog. *Nat. Syst.* Gentianaceæ.

Pursh, Flor. Am. i. 137. Griffith, Med. Bot. 458.

The herbaceous portion of the plant is officinal. It is a pure bitter, with no astringency or aroma.

Infusion of American Centaury.

℞. American centaury, one ounce.
Boiling water, one pint.

Infuse; and strain when cool. Dose, a wineglassful, every two hours, as a tonic.
Chapman.

Tincture of American Centaury.

℞. American centaury, one part.
Diluted alcohol, six parts.

Digest for four days, express, and filter.
Dose, a fl. drachm to two fl. drachms.

Extract of American Centaury.

℞. American centaury, one part.
Diluted alcohol, eight parts.

Subject the herb to two or three macerations in the alcohol; heat to boiling; unite the tinctures, distil off the alcohol, and evaporate the residue.
Dose, five to ten grains.

SABINA.

Savine.

Savine is the tops of *Juniperus sabina*, a small tree or shrub, a native of the south of Europe, somewhat resembling the red cedar in its foliage.

Sex. Syst. Dicœcia monadelph. *Nat. Syst.* Pinaceæ.

Linn. Sp. Pl. 1472. Griffith, Med. Bot. 608.

The tips of the branches are officinal. These, when dried, have a bitter, acrid taste, and an unpleasant odor. Savine is an active stimulant, acting powerfully on the skin and uterus. It also acts as an external irritant. The dose of the powder is from five to fifteen grains, three or four times a day.

Powder of Savine and Ginger.

℞. Powdered savine,
" ginger,
each, one drachm.
Sulphate of potassium,
two drachms.

Mix, and divide into six powders. One, to be taken twice a day, in amenorrhœa.
Ellis.

Powder of Savine and Spanish Flies.

℞. Powdered savine, one drachm.
" Spanish flies,
two grains.

Mix, and divide into four powders. One, at bedtime, in amenorrhœa. *Ellis.*

Powder of Savine and Verdigris.

℞. Powdered savine,
" verdigris, equal parts.

Mix. As an escharotic to venereal warts.
J. Hunter.

Powder of Savine and Pinkroot.

℞. Powdered pinkroot,
" senna, each, two scruples.
" savine, twelve grains.

Mix, and divide into six powders. Anthelmintic. One, every morning, till three are taken, then a dose of castor oil. If required, repeat. *Ellis.*

Pills of Savine.

℞. Extract of savine, half an ounce.
Powdered savine, two drachms.
Oil of savine, sufficient.

Mix, and form pills of two grains each. Four, three times a day, as an emmenagogue. *Niemann.*

Extract of Savine.

℞. Powdered savine, one part.
Alcohol (60 pr. ct.), six parts.

Exhaust the savine by the process of displacement; distil off the alcohol, and evaporate on a water-bath.
Paris Codex.

Ph. Germ. exhausts with diluted alcohol.

Oil of Savine.

℞. Savine, at will.
Water, sufficient to cover.

Distil, and collect the oil that floats on the product. *Guibourt.*

A powerful stimulant emmenagogue, and rubefacient. Dose, two to five drops.

Emulsion of Oil of Savine.

℞. Oil of savine, one fl. drachm.
Spirit of nitrous ether,
three fl. drachms.
Mucilage of acacia, one fl. ounce.
Water, sufficient for six fl. ounces.

Mix. Dose, a teaspoonful every two hours, in amenorrhœa. *Tilt.*

Infusion of Savine.

℞. Savine, one drachm.
Boiling water, eight fl. ounces.

Infuse for half an hour, and strain. Dose, half a fl. ounce. *Pereira.*

℞ Savine, one drachm.
Camphor, six grains.
Boiling water, five fl. ounces.
Infuse, and strain. *Horn.*

Tincture of Savine.

℞ Savine, two ounces and a half.
Alcohol, sufficient.
Obtain by maceration and displacement twenty fl. ounces of tincture.
Dose, twenty minims to a fl. drachm. *Brit. Ph.*

Compound Tincture of Savine.

℞ Extract of savine, one ounce.
Tincture of castor, sixteen fl. ounces.
" myrrh, eight fl. ounces.
Digest till dissolved. As an emmenagogue. *Lond. Ph.* 1788.

℞ Compound tincture of savine, one fl. ounce.
Tincture of black hellebore, half a fl. ounce.
Tincture of castor, two fl. drachms.
Mix. Forty drops, three times a day. *Ellis.*

Fluid Extract of Savine.

℞ Savine, in powder, No. 50, sixteen troyounces.
Stronger alcohol, sufficient.
Moisten powder with half a pint of the alcohol, pack firmly in a percolator, add half a pint of the alcohol, and macerate for four days. Then displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder on a water-bath to two fl. ounces and mix. *U. S. Ph.*
A convenient form for administering savine. Dose, five to fifteen minims.

Savine Cerate.

℞ Fluid extract of savine, three fl. ounces.
Resin cerate, twelve troyounces.
Melt the cerate, add the fluid extract, stir, at a moderate heat, constantly until the alcohol has evaporated, and finally until cool. *U. S. Ph.*
As a dressing to keep up the discharge of blisters, etc.

Savine Ointment.

℞ Powdered savine,
Lard, equal parts.
Mix. As an application to venereal warts. *Radius.*

℞ Fresh savine, bruised, eight ounces.
Yellow wax, three ounces.
Lard, sixteen ounces.
Melt the lard and wax together, mix in the savine, digest for twenty minutes, and express through linen. *Brit. Ph.*

℞ Extract of savine, one part.
Simple ointment, nine parts.
Mix thoroughly. *Ph. Germ.*

SACCHARUM.

Sugar.

Sugar is procured from the *Saccharum officinarum* and other species, and is used in several forms, as molasses, brown and refined sugar, the latter of which only is recognized in the *U. S. Ph.*

Syrup.

℞ Sugar, thirty-six troyounces.
Water, sufficient.
Dissolve the sugar, with heat, in twenty fl. ounces of the water, boil and strain while hot; pass through the strainer sufficient water to make the syrup measure forty-four fl. ounces, or weigh fifty-five troyounces. It has the sp. gr. 1.317. *U. S. Ph.*
Somewhat diluted with water it has been recommended by Dr. Trait in granular eyelids.

Caramel, or Burnt Sugar.

℞ Sugar, at will.
Place in a shallow vessel, and heat over a gentle fire till it assumes a dark-brown color. Used as a coloring for spirits, etc. *Gray.*
The previous addition of some ammonia or carbonate of ammonium facilitates the conversion of the sugar into caramel.

Vermifuge Sugar.

℞ Ethiops mineral, two parts.
Quicksilver, three parts.
Rub together until the globules are extinguished; add
Sugar, seven parts,
and mix thoroughly. *Soubeiran.*

Saccharated Powders.

Under this name, M. Béral has proposed the mixture of sugar with various active medicines, all the ingredients being reduced

to powder. The peculiarity of the preparation is that sugar enters it in large proportion, while the true medical agent is in small quantity.

Saccharated Powder of Digitalis.

℞ Fresh leaves of digitalis, deprived of midribs and nerves, one part.

Place in bibulous paper, and expose to the air in the shade for twelve hours. Then mix carefully with

White sugar, three parts.

Dry the mixture with a gentle heat, pulverize, and preserve in opaque bottles.

In the same manner may be prepared saccharated powders of fresh *aconite* leaves, *belladonna, hemlock, henbane, savine, stramonium,* and *rue.* *Dorvault.*

Saccharated Powder of Jalap.

℞ Tincture of jalap, sixty parts.
Sugar, in small lumps, five hundred parts.

Pour the tincture on the sugar, and permit the alcohol to evaporate spontaneously, or on a sand-bath. The process of evaporation may be accelerated by reducing the sugar to a coarse powder, twenty-four hours after the addition of the tincture. The active principle is retained in the sugar.

In the same manner may be prepared saccharated powders of—

Belladonna,	Myrrh,
Castor,	Nutmeg,
Cinnamon,	Rhubarb,
Cinchona,	Saffron,
Cloves,	Squill,
Henbane,	Tolu,
Ipecacuanha,	Vanilla,
Mace,	Etc. Etc.

This mode of obtaining the active principles of medicines in a soluble form, may be resorted to, advantageously, in making lozenges. *Dorvault.*

Oleo-saccharated Powders.

℞ Any volatile oil, one part.
Sugar, seventy-two parts.

Rub together. For convenience of preparation, one drop of the oil to one drachm of sugar is sufficiently accurate for all practical purposes. By this admixture, the volatile oil becomes soluble in water. *Dorvault.*

Ph. Germ. uses one drop of the oil to two grammes of sugar.

SACCHARUM LACTIS.

Sugar of Milk.

℞ Whey, at will.

Clarify with white of egg, and evaporate on water-bath to crystallization, and set aside in a cool place. *Redwood.*

Cooling and slightly laxative, in doses of two drachms to one ounce; but mostly employed as a vehicle for medicinal powders, and for reducing other medicinal substances to very fine powders by triturating them with the hard milk sugar. Cow's milk, diluted with water and with milk sugar added, has been recommended as a good substitute for the milk of the human female.

Mixture of Sugar of Milk and Iceland Moss.

℞ Iceland moss, four drachms.
Water, one pint and a half.

Reduce to one-half by boiling, strain, and add

Sugar of milk, two drachms.
Milk, one pint.
Syrup of asparagus, three ounces.

A cupful occasionally, in chronic catarrh. *Cadet.*

Mixture of Sugar of Milk and Gum Arabic.

℞ Sugar of milk,
Sugar, each, two pounds.
Gum Arabic, three pounds.
Extract of dog-grass, seven ounces.

Mix. Half an ounce, dissolved in a quart of water, forms a refreshing and demulcent drink. *Cadet.*

Sugar of Milk Draught.

℞ Sugar of milk, half an ounce.
Boiling water, two pounds.
Lemon juice, sufficient.

Mix. Recommended in cholera, to appease the thirst. *Ammon.*

SAGAPENUM.

Sagapenum.

This is a gum resin, derived most probably from some plant belonging to the Apiaceæ. It is in irregular masses, composed of cohering fragments of a yellowish-brown, olive, or reddish-yellow color; of a waxy consistence, of a somewhat alliaceous odor, and a pungent, bitterish, unpleasant taste. It is a mild stimulant, somewhat resembling assafetida in its properties, but inferior to

it. It has been used as an emmenagogue and antispasmodic, but it is now seldom prescribed internally, but is still employed as an external application as a discutient.

Prepared Sagapenum.

℞ Sagapenum, one pound.
Water, sufficient to cover.

Heat the sagapenum with the water until they are mixed. Strain through a hair sieve, and evaporate on a water-bath, stirring constantly. *Lond. Ph.* 1836.

Compound Sagapenum Pills.

℞ Sagapenum, one ounce.
Aloes, half a drachm.
Syrup of ginger, sufficient.

Beat together. Dose, ten grains. *Lond. Ph.* 1836.

As a stimulant, antispasmodic laxative, in flatulent colic, etc.

SAGO.

Sago.

This is the prepared fecula of the pith of various species of Palmaceæ and Cycadaceæ. It is prepared in two forms, meal and pearl sago, the latter of which is most generally employed. This is in small, hard, whitish or brownish grains, inodorous, and of a mucilaginous taste. It is insoluble in cold water, but by long boiling forms a glutinous solution. It is nutritive, easily digestible, and forms an excellent article of diet for the sick and convalescent.

Sago Mucilage.

℞ Sago, one ounce.
Water, one pint.

Macerate by a gentle heat, for two hours, then boil for fifteen minutes, stirring continually, till the grains are perfectly dissolved; add sugar or flavoring, according to circumstances. *A. T. Thomson.*

Sago Posset.

℞ Sago, two ounces.
Water, two pints.

Macerate for two hours, by a gentle heat, then boil, till a mucilage is formed; then rub half an ounce of sugar on the rind of a lemon, add this and one fl. drachm of tincture of ginger to half a pint of sherry wine, pour the whole into the sago mucilage, and boil for five minutes. Useful in convalescence to restore strength. A wineglassful to be taken every four or five hours. *A. T. Thomson.*

Sago Milk.

℞ Sago, one ounce.
Water, one pint.

Macerate for half an hour, then add

Milk, one pint and a half.

Boil slowly, till the sago is perfectly dissolved. *A. T. Thomson.*

SALICINUM.

Salicin.

℞ Decoction of willow bark, at will.

Treat with slaked lime, filter, and evaporate to consistence of syrup; add alcohol, again filter, evaporate, and let crystallize; wash the crystals with cold water. *Cottereau.*

Dose, four or six grains every three hours, in apyrexia of intermittents.

Pills of Salicin.

℞ Salicin,
Extract of gentian,
each, twelve grains.
Liquorice powder, sufficient.

Mix, and make six pills. *Foy.*

℞ Salicin, twenty-four grains.
Mucilage of gum Arabic, sufficient

to make eight pills. Dose, one pill every three hours, in the apyrexia of intermittent fevers. *Ellis.*

Compound Salicin Pills.

℞ Salicin, one scruple.
Compound rhubarb pill, two scruples.

Mix, and make twelve pills. *Beasley.*

Compound Powder of Salicin.

℞ Salicin, two scruples.
Aromatic powder, one drachm.

Mix, and divide into twelve powders. *Neligan.*

℞ Salicin, fifteen grains.
Tartar emetic, one grain.
Powdered sugar, fifty grains.

Mix, and divide into ten powders. One, thrice a day. *Krombolz.*

SALIX

Willow.

Many species of willow have been used in medicine, and are recognized in the different pharmacopœias; that admitted by the *U. S. Ph.* is the *Salix alba*, a small tree, a native

of Europe, but extensively cultivated in the United States.

Sex. Syst. Dicœcia diand. *Nat. Syst.* Salicaceæ.

Linn. Sp. Pl. 1449. Lindley, Flor. Med. 318.

The officinal portion is the bark; this is in thin, flexible, fibrous pieces, of a brown color. It has a peculiar, aromatic odor, and an astringent, bitter taste. It is tonic and astringent, and has been used as a substitute for Peruvian bark.

Extract of Willow Bark.

℞. Powdered willow bark, two parts.
Distilled water, one part.

Macerate twelve hours, transfer to a percolator, exhaust, raise the liquid to the boiling point, strain, and evaporate to the consistence of an extract. *Dorvault.*

Compound Powder of Willow Bark.

℞. Powdered willow bark, } equal parts.
" horse-chestnut bark, }
" gentian, }
" calamus, }
" avens root, }

In intermittent fevers, in drachm doses. *Hufeland.*

Willow Bark Dentifrice.

℞. Powdered willow bark,
" charcoal,
each, half an ounce.
Extract of myrrh, two drachms.
Balsam of Peru, half a scruple.
Oil of cinnamon, three drops.

Triturate well together. *Phœbus.*

Decoction of Willow Bark.

℞. Contused willow bark,
one ounce and a half.
Water, fifteen fl. ounces.

Boil down to one-half. *Niemann.*

Ointment of Willow Leaves.

℞. Expressed juice of willow leaves, two fl. ounces.
Lard, sufficient.

Mix, and heat till moisture is driven off. Useful as a dressing to foul ulcers. *Hufeland.*

SALVIA.

Sage.

Though many species of Salvia possess analogous remedial properties, one only is recognized by the *U. S. Ph.*—the *Salvia officinalis*, a perennial plant, native of the south of Europe, but generally cultivated in our gardens, flowering in June, at which time it should be collected.

Sex. Syst. Diand. monog. *Nat. Syst.* Lamiaceæ.

Linn. Sp. Pl. 34. Griffith, Med. Bot. 505.

The leaves are the officinal portion. These have a strong, fragrant odor, and a warm, bitterish, aromatic, somewhat astringent taste. Sage is stimulant, with some astringent and tonic powers. It is principally used in the composition of gargles, and is also said to abate the excessive sweats in hectic fever. The dose, in powder, is from twenty to thirty grains.

Infusion of Sage.

℞. Sage, one troyounce.
Boiling water, one pint.

Infuse for half an hour, and strain. *U. S. Ph.*

Sugar and lemon juice may be added, according to circumstances. As a drink in fevers, and as a vehicle for gargles.

Compound Infusion of Sage.

℞. Sage,
Boneset, each, half an ounce.
Cascarilla, one drachm.
Water, one pint and a half.

Infuse till cold, and strain. Dose, a wineglassful every three or four hours. In hectic fever. *Ellis.*

Water of Sage.

℞. Sage, one part.
Water, sufficient.

Macerate and distil two parts. Used as a vehicle. *Paris Codex.*

Concentrated Sage Water.

℞. Sage, five parts.
Water, sufficient.
Alcohol, one part.

Macerate, and distil five parts.

Sage water is made by diluting one part of this concentrated, with nine parts of distilled water. *Ph. Germ.*

Aromatic Water. (Cephalic Water.)

℞. Sage, four parts.
Rosemary, } each, two parts.
Peppermint, }
Lavender, }

Fennel,
Cinnamon, each, one part.
Alcohol, twenty-six parts.
Macerate for a day with sufficient water, and distil seventy-two parts. *Ph. Germ.*

Gargle of Sage.

R. Infusion of sage, one pint.
Diluted sulphuric acid, two drachms.
Honey of roses, one ounce.
Mix. In relaxation of the uvula, etc. *Radius.*

R. Infusion of sage, two pints.
Tincture of Peruvian bark,
Syrup of mulberries, each, half a fl. ounce.
Spirit of horseradish, one drachm.
Mix. More active than the last. *Cadet.*

Vinegar of Sage.

R. Sage, bruised, one part.
White vinegar, twelve parts.
Macerate for ten days, express, and filter. *Paris Codex.*

Distilled Vinegar of Sage.

R. Sage, one part.
Vinegar, six parts.
Mix, and distil four parts. *Béral.*
As a gargle, mixed with water.

SAMBUCUS

Elder Flowers.

The species recognized by the *U. S. Ph.* is the *Sambucus Canadensis*, which appears to be perfectly identical in properties with the European kind, the *S. nigra.*

Sex. Syst. Pentand trigyn. *Nat. Syst.* Caprifoliaceæ.

Willd. Sp. Pl. 1494. Griffith, Med. Bot. 353.

The officinal portion is the flowers, but the berries, bark, and leaves are also used. The flowers have a faint but peculiar odor, when dried, and a bitterish taste. They are slightly stimulant and diaphoretic. The berries are diaphoretic and laxative; the bark acts as a hydragogue purgative, as do also the leaves.

Elder-Flower Water.

R. Fresh elder flowers, ten pounds.
Water, twenty pounds.
Mix, and distil ten pounds. *Brit. Ph.*
Principally used as a flavoring ingredient in mixtures and emulsions.

Vinegar of Elder Flowers.

R. Elder flowers, one part.
White vinegar, twelve parts.
Macerate for ten days, express, and filter. As a gargle. *Paris Codex.*

Gargle of Elder Flowers.

R. Elder flowers, one ounce.
Boiling water, one pint.
Infuse, strain, and add
Nitrate of potassium, half an ounce.
Tincture of burnet, three fl. drachms.
Oxymel, two fl. ounces.
Mix. *Saunders.*

Fomentation of Elder Flowers.

R. Elder flowers, one part.
Tepid water, twenty parts.
Infuse for one hour, and strain. *Paris Codex.*

Extract of Elder Berries.

R. Ripe elder berries, at will.
Heat gradually, with constant stirring, until ruptured, then express, let settle, strain, and evaporate to a soft extract, twelve parts of which are to be incorporated while warm, with one part of powdered sugar. *Ph. Germ.*
Has been praised in rheumatic, gouty, and eruptive affections; in doses of one to four drachms.

Mixture of Extract of Elder Berries.

R. Extract of elder berries, Pulp of prunes, Syrup of red poppies, each, two ounces.
Nitrate of potassium, one drachm.
Mix. Two or three spoonfuls a day, in asthma. *St. Marie.*

Decoction of Elder Bark.

R. Elder bark, three ounces.
Water, two pints.
Boil to one-half. Half a pint, morning and evening, in dropsy. *Sydenham.*

Ointment of Elder Leaves.

R. Fresh elder leaves, three pounds.
Lard, four pounds.
Suet, two pounds.

Boil the leaves in the lard till crisp; express, strain, add the suet, and melt.
Dub. Ph. 1826.

As a cooling application.

Ointment of Elder Flowers.

℞. Elder flowers,
Lard, equal parts.

Melt, and continue heat, till all moisture is driven off, and express. *Béral.*

Used as the last.

SANGUINARIA.

Bloodroot.

This is the rhizome of the *Sanguinaria Canadensis*, popularly known as bloodroot, or puccoon. It is a small, herbaceous perennial, flowering at the very commencement of the spring; at which time the leaf is small, but attains a large size during the summer.

Sex. Syst. Polyand. monog. *Nat. Syst.* Papaveraceæ.

Linn. Sp. Pl. 723. Griffith, Med. Bot. 127.

The rhizome is horizontal, abrupt, often contorted, of a reddish-brown color externally, and of a bright orange-red within. When dried it is somewhat flattened, much wrinkled and twisted, of a reddish-brown color externally, and of a bright orange within, becoming brown by exposure. The powder is brownish-red. It has a faint, narcotic odor, and a bitterish, acrid taste, which is very persistent. It is an acrid emetic, with narcotic and stimulant properties. Dose, as an emetic, from ten to twenty grains; for other purposes, from one to five grains.

Pills of Bloodroot.

℞. Powdered bloodroot, one drachm.
Conserve of roses, sufficient.

Mix, and make thirty pills. One to two as an alterative, etc., five to ten as an emetic.

Infusion of Bloodroot.

℞. Bloodroot, half an ounce.
Boiling water, one pint.

Infuse for two hours. Dose, half to one fl. ounce. *Beasley.*

Vinegar of Bloodroot.

℞. Bloodroot, in powder,
No. 40, four troyounces.
Diluted acetic acid, sufficient.

Obtain by maceration for seven days, or by percolation, two pints. *U. S. Ph.*

Used in same doses as the tincture.

Tincture of Bloodroot.

℞. Bloodroot, in powder,
No. 50, four troyounces.

Displace with a mixture of three parts of alcohol and one of water, until two pints of tincture are obtained. *U. S. Ph.*

As emetic, three or four fl. drachms; as expectorant, alterative, etc., thirty to sixty drops.

℞. Bruised bloodroot, two ounces.
Spirit of nitrous ether, two pints.

Digest eight days, and filter.

This is a valuable expectorant and diaphoretic, in doses of half a fl. drachm to one fl. drachm. *Mettauer.*

Compound Tincture of Bloodroot.

℞. Bloodroot,
Lobelia,
Skunk-cabbage root,
Asarabacca,
Pleurisy root,
} each, in coarse powder, one ounce.

Place them in a vessel, and cover with

Boiling water or vinegar, one pint.

and cover tightly. When cold, add

Alcohol, three pints.

Macerate fourteen days, and filter. Used as an emetic. *Ecl. Med. Jour.*

Syrup of Bloodroot.

℞. Coarsely-powdered bloodroot, eight ounces.
Acetic acid, four ounces.
Water, five pints.
Sugar, (troy) two pounds.

Mix two fl. ounces of the acetic acid with a pint of water, and macerate the root for three days. Transfer to a percolator, and displace with the remainder of the water, previously mixed with the other half of the acetic acid. Evaporate on a water-bath to eighteen fl. ounces, add the sugar, and form a syrup. *T. S. Wiegand.*

SANTALUM.

Red Saunders.

This is the wood of *Pterocarpus santalinus*, a lofty tree, found in the East Indies. It is imported in logs or billets.

Sex. Syst. Diadelph. decand. *Nat. Syst.* Fabaceæ.

Linn. Suppl. 318. Griffith, Med. Bot. 245.

Red saunders is a mild astringent and

tonic; but it is chiefly, if not exclusively, employed to impart color.

SANTALUM ALBUM.

Sandalwood.

This tree is indigenous to India; its wood is heavy, light colored, and fragrant.

Nat. Ord. Santalaceæ.

The wood yields on distillation with water a highly fragrant volatile oil, which is much used in perfumery. This oil has been highly recommended by Dr. T. B. Henderson, Berkeley Hill, and others, as a remedy in gonorrhœa, and is considered as equal or even superior to copaiba and cubebs. It is given in doses of fifteen to thirty minims thrice daily. It is given either in gelatin capsules, or dissolved in three parts of alcohol.

Zoll's Pink Paste.

R. Oil of sandalwood, sixty drops.
" copaiba, three drachms.
White turpentine, four drachms.
Sugar,
Gum Arabic, each, one ounce.

Mix thoroughly. *Maryland Coll. Ph.*

SANTONICA.

Semen Contra.
Levant Wormseed.

The unexpanded flowers of various species of *Artemisia* indigenous to Barbary, Southern Russia, and the Levant have occasionally been used under the above names; but the only kind recognized now by the pharmacopœias is derived from *Art. Cina*, an herbaceous plant indigenous to Persia.

Sex. Syst. Syng. pol. super. *Nat. Syst.* Asteraceæ.

Willkomm, Botan. Zeit., 1872, No. 9.

They are about a line in length, oval, obtuse at both ends, of a greenish-brown color, of a strong, somewhat terebinthinate odor, and a bitter camphoraceous taste, and resembling small seeds in appearance. Santonica has anthelmintic properties. Dose, ten to sixty grains.

Powder of Santonica.

R. Santonica,
Extract of tansy, each, six grains.
Oxide of iron, four grains.
Oil of valerian, one drop.

Mix. *Augustin.*

R. Santonica, three drachms.
Powdered jalap, thirty grains.
Calomel, six grains.

Mix and divide into six powders. Dose, for a child of six years, one, morning and night. *Hufeland.*

Infusion of Santonica.

R. Santonica, one part.
Boiling water, one hundred parts.

Macerate until cold, and strain. Dose, one to two fl. ounces. *Dorvault.*

Electuary of Santonica.

R. Santonica, ten grains.
Sulphate of iron, four grains.
Jalap,
Honey, each, one scruple.

Mix. *Rosenstein.*

Mixture of Santonica.

R. Infusion of santonica,
four fl. ounces.
Syrup of senna, one fl. ounce.

Mix. *Foy.*

R. Santonica, ninety grains.
Hot water, sufficient for making infusion three fl. ounces.
Syrup of orange-peel, two drachms.

Mix. A tablespoonful every two hours. *Radius.*

Enema of Santonica.

R. Santonica,
Valerian, each, four drachms.
Boiling water, sufficient.

Make six fl. ounces of infusion, and add
Assafetida, forty grains.
previously rubbed with the yolk of an egg. Use for two clyster. *G. A. Richter.*

Oleoresinous Extract of Santonica.

R. Santonica, bruised, at will.

Exhaust with a mixture consisting of equal weights of alcohol and ether; distil and evaporate to a thin extract. *Ph. Germ.*

Dose, five to fifteen grains.

Syrup of Santonica.

R. Santonica, one part.
Boiling water, sufficient.

Obtain ten parts of infusion and dissolve in it nineteen parts of sugar. Dose, two to four fl. drachms. *Dorvault.*

SANTONINUM.

SANTONIN.

℞ Santonica, in powder,
No. 40, forty-eight troyounces.
Lime, recently slaked,
eighteen troyounces.
Animal charcoal,
Diluted alcohol, } each,
Acetic acid, } sufficient.
Alcohol,

Digest santonica and lime with twelve pints of diluted alcohol for twenty-four hours, and express; repeat digestion and expression twice with similar quantities of diluted alcohol. Mix the tinctures, distil and evaporate to eight pints, filter, evaporate to four pints, supersaturate slightly with acetic acid, and after two days, collect the crystalline mass, wash with water, and dry. Boil the mass with ten times its weight of alcohol, digest for several hours with animal charcoal, filter while hot, wash the charcoal with sufficient hot alcohol, and crystallize; dry, and preserve in dark bottles. *U. S. Ph.*

It is tasteless at first, afterwards bitter; almost insoluble in cold water; on exposure to light it becomes yellow, but its medicinal properties are said not to be affected by this change. Dose, half to three or even eight grains to adults. Large doses usually produce chromatopsy, the objects of vision appearing yellow or red.

Powder of Santonin.

℞ Santonin, six grains.
Sugar of milk, fifteen grains.

Mix, divide into six powders, and give one night and morning, to a child five years old, for lumbrici. *Thomas.*

Lozenges of Santonin.

℞ Santonin, half a troyounce.
Sugar, eighteen troyounces.
Tragacanth, half a troyounce.
Orange-flower water, sufficient.

Bub the powders together, and make four hundred and eighty lozenges. *U. S. Ph.*

Santonin lozenges of the German pharmacopœia are made with chocolate, weigh one gramme each, and contain each five centigrammes—the weaker, half that quantity, or about three-eighths of a grain—of santonin. Santonin lozenges of *Paris Codex* contain one centigramme of santonin, and are made with sugar, and colored by carmine.

Santonate of Sodium.

℞ Santonin, two ounces.
Solution of soda, four fl. ounces,
or sufficient.
Distilled water, twelve fl. ounces.

Digest at about 170° until dissolved, evaporate and crystallize to form prisms containing fifty-four per cent. of santonin.

If the solution be evaporated until a thick pellicle forms, pearly needles containing sixty per cent. of santonin are obtained. *Dondé.*

Syrup of Santonate of Sodium.

℞ Santonate of sodium, thirty grains.
Distilled water, one ounce.
Syrup, eighteen fl. ounces.

Concentrate the syrup to 32° B., and add the santonate, previously dissolved in the water. A tablespoonful represents one grain of santonin. *Dondé.*

SAPO.

SOAP.

Soaps are combinations of animal or vegetable oils with one or more of the alkalies; they are principally used for washing, but some of them are officinal.

SAPO DURUS.

HARD SOAP.

Under the above name officinal in the *Brit. Ph.*, under the name of *Sapo* in the *U. S. Ph.*, and under the name of *Sapo medicatus* in the *Ph. Germ.* It is a combination of olive oil and soda.

Spanish or Castile Soap.

This is the officinal soap of the *U. S. Ph.*, and presents two varieties, the white and the marbled, the first of which only should be used.

SAPO MOLLIS.

SOFT SOAP.

This soap is a combination of olive or other vegetable oils and potassa, or animal oils with the same alkali.

SAPO VULGARIS.

COMMON SOAP

Is a hard soap, made from tallow and caustic soda.

Besides these officinal soaps there are many others, which are used medicinally, or for cleansing purposes.

Almond Soap.

℞ Caustic solution of soda, one thousand parts.
Oil of almonds, two thousand one hundred parts.

Mix, and keep the mixture for some days at a temperature of 68° F., stirring from time to time, until it acquires the consistence of a soft paste; place in moulds until dry. It should not be used for medicinal purposes, until it has been exposed to the action of the air for a month or two.

Paris Codex.

Beef-Marrow Soap.

℞ Purified beef marrow, five hundred parts.
Caustic solution of soda, two hundred and fifty parts.
Common salt, one hundred parts.
Water, one thousand parts.

Put the marrow, with hot water, into a porcelain vessel, and heat until it is melted; then add the solution of caustic soda, by degrees, constantly stirring, till saponification is complete; then add the salt, slightly stirring, collect the soap which rises, drain it, melt it by a gentle heat, pour into moulds, and allow it to solidify.

Paris Codex.

Soap of Turpentine. (Starkey's Soap.)

℞ Dry carb. of potassium, Oil of turpentine, Venice turpentine, } equal parts.

Triturate the potassium with the oil, and then with the turpentine, until the mass has attained a proper consistence. Preserve in an earthenware vessel.

Paris Codex.

Was supposed to be a corrector of the injurious effects of opium, hellebore, etc. It is now principally given in gonorrhœa and dropsy. Dose, eight to ten grains.

℞ Hard soap, in powder,
Oil of turpentine, each, six parts.
Carbonate of potassium, one part.

Beat together into a uniform mass.

Ph. Germ.

Known also as *External balsam of life.*

Aromatic Soap.

℞ Concentrated solution of soap, six ounces.
Oil of bergamot, " lavender, " rosemary, } each, two drachms.

Mix. Employed in baths, as a tonic and antispasmodic. *Niemann.*

Camphorated Soap.

℞ White soap, sixteen ounces.
Boiling water, eight ounces.
Olive oil, six ounces.
Powdered camphor, one drachm.

Dissolve the soap in the water, evaporate gently to the consistence of a soft paste, add the camphor incorporated in the oil, mix well, and pour into moulds.

Said to be useful in chaps and excoriations. *Wetzler.*

Cosmetic Soap Powder.

℞ White soap, twelve ounces.
Carbonate of potassium, two ounces.
Powdered orris root, three ounces.
" horse-chestnuts, two pounds.
Oil of lavender,
" bergamot, each, forty drops.
" lemon, thirty drops.
" cloves, ten drops.
Sugar, half an ounce.

Mix, and form a powder. *Niemann.*

Arsenical Soap.

℞ Arsenious acid, two pounds.
Carbonate of potassium, twelve ounces.
Camphor, five ounces.
White soap, two pounds.
Powdered lime, eight ounces.

Reduce each to powder, and mix. Used as a preservative for specimens of natural history against the attacks of insects. Known as *Beconi's arsenical soap.*

Gannal.

Soap Cerate.

℞ Soap plaster, two troyounces.
Yellow wax, two and a half troyounces.
Olive oil, four troyounces.

Melt together, adding the oil last, and stir till cool. *U. S. Ph.*

Soap cerate is cooling and sedative.

Soap Cerate Plaster.

℞ Hard soap, in powder, ten ounces.
Yellow wax, twelve and a half ounces.

Oxide of lead, fifteen ounces.
Olive oil, one pint (imp.).
Vinegar, one gallon (imp.).

Dissolve the oxide in the vinegar by boiling; add the soap, and boil until most of the moisture is evaporated; then add wax and oil, melt, and mix. *Brit. Ph.*

Used like the preceding.

Camphorated Soap Liniment. (Opodeldoc.)

℞. Common soap, sliced, three ounces.
Camphor, one ounce.
Oil of rosemary,
" origanum, each, one fl. drachm.
Alcohol, one pint.

Digest the soap in the alcohol, on a sand-bath, until dissolved; add the camphor and oils, dissolve, and pour into broad-mouthed bottles. *U. S. Ph.* 1850.

Ph. Germ. adds to the above quantity about six drachms of ammonia water.

℞. Alkaline tincture of soap, ten parts.
Spirit of camphor, nine parts.
Oil of almonds, one part.

Mix. *Paris Codex.*

Alkaline Tincture of Soap.

℞. White soap, twenty parts.
Carbonate of potassium, one part.
Alcohol (60 pr. ct.), one hundred parts.

Dissolve. *Paris Codex.*

Soap Liniment. (Liquid Opodeldoc.)

℞. Soap, in shavings, four troyounces.
Camphor, two troyounces.
Oil of rosemary, half a fl. ounce.
Water, six fl. ounces.
Alcohol, two pints.

Digest the soap in the water until dissolved; add the alcohol, holding the camphor and oil in solution, and filter. *U. S. Ph.*

The formula of *Brit. Ph.* is very similar; that of *Ph. Germ.* has about one ounce of ammonia water in the above quantity.

Ammoniacal Soap Liniment.

℞. Soap, in shavings, one part.
Water, thirty parts.
Alcohol, ten parts.
Water of ammonia, fifteen parts.

Digest the soap with the water until dissolved; then add the alcohol and ammonia. *Ph. Germ.*

Tincture of Soap. (Soap Spirit.)

℞. Olive oil soap, one part.
Alcohol, three parts.
Rose water, two parts.

Dissolve and filter. *Ph Germ.*

Saponine.

(*For cleaning gloves.*)

℞. Powdered soap, two hundred and fifty parts.
Solution of chlorinated potassa, one hundred and sixty-five parts.
Solution of ammonia, ten parts.
Water, one hundred and fifty parts.

Mix, and form a paste; a small portion rubbed on a glove with a piece of flannel will cleanse it. *Duvignan.*

Grease Balls.

℞. Fuller's earth, two pounds four ounces.
Carbonate of sodium,
Soap, each, eight ounces.

Add

Yolks of eggs, eight.

Well beaten with

Ox gall, eight ounces.

Levigate thoroughly, form into cakes or balls, and dry. *Lenormand.*

Bolus of Soap.

℞. White soap, two scruples.
Oil of caraway, two or three drops.
Syrup, sufficient.

Mix, and make two boluses. They are purgative. *Swediaur.*

Nitrated Pills of Soap.

℞. White soap, twenty parts.
Marsh mallow root, powdered, three parts.
Nitrate of potassium, two parts.

Beat together till well incorporated, and divide into four-grain pills. *Paris Codex.*

Simple soap pills of *Paris Codex* contain three grains of soap.

Pills of Soap and Ox Gall.

℞. Powdered white soap, two drachms.
Extract of ox gall, one drachm.
Mix, and incorporate
Powdered guaiacum,
Calomel, each, half a drachm.
Powdered guaiacum wood, sufficient.

Mix, and make four-grain pills. In gout, one to two, morning and evening.
Vicq D'Azir.

Compound Soap Pills.

℞. White soap, three drachms.
Ammoniac,
Rhubarb, each, one drachm.
Aloes, ten grains.
Assafetida,
Saffron, each, thirty-six grains.

Mix, and make three-grain pills. Purgative and alterative; four to six a day.
Recamier.

℞. Powdered opium, half an ounce.
Soap, two ounces.

Beat into a pilular mass, with water. Dose, three to five grains. *U. S. Ph.*

Soap Plaster.

℞. Soap, sliced, four troyounces.
Lead plaster, thirty-six troyounces.

Rub the soap into a semi-fluid state with water; then mix it with the plaster, previously melted, and boil to proper consistence. *U. S. Ph.*

℞. Hard soap, six ounces.
Lead plaster, thirty-six ounces.
Resin, one ounce.

Proceed as above. *Brit. Ph.*
The plaster of *Ph. Germ.* contains some yellow wax and a little camphor; that of *Paris Codex* some white wax.

Electuary of Soap, etc.

℞. White soap, one drachm and a half.
Venice turpentine, one drachm.
Seneka,
Marsh mallow, each, two drachms.
Rob of juniper, sufficient.

Mix. Four teaspoonfuls a day. *Vogt.*

Essence of Soap.

℞. White soap, twenty-four parts.
Distilled water, thirty-two parts.
Alcohol (.923), sixty-four parts.
Carbonate of potassium, one part.
Essence of lemon, sufficient.

Dissolve the soap in the water and alcohol, add the potassium and essence, and filter. Used for the toilette. *Soubeiran.*

Camphorated Essence of Soap.

℞. White soap, three parts.
Camphor, one part.
Spirit of rosemary, sixteen parts.

Dissolve the camphor, and then the soap, in the spirit. As an embrocation in rheumatic pains, etc. *Guibourt.*

Ethereal Solution of Soap.

℞. Beef marrow soap, one part.
Acetic ether, five parts.

Dissolve by aid of a water-bath. Used as an embrocation in rheumatic pains, etc.
Foy.

Camphorated Acetic Balsam of Soap.

℞. Common soap,
Camphor, each, one drachm.
Acetic ether, one ounce.
Oil of thyme, ten drops.

Dissolve the soap in the ether with the aid of heat; add the camphor, then the oil, and filter. Used as above. *Cottereau.*

Cataplasm of Soap.

℞. Common soap, four drachms.
Roasted onion,
Mustard, each, two ounces.
Water, sufficient.

Heat together, and mix into a cataplasm. As a maturating application to boils, abscesses, etc. *Foy.*

Soap Suppository.

℞. Soap, two ounces.
Common salt, one ounce.
Honey, sufficient.

Mix, and form into conical suppositories, and oil them on the surface. *Spielmann.*

Clyster of Soap.

℞. Barley water, six ounces.
White soap, one drachm.
Honey, six drachms.

Mix, and dissolve. *Brera.*

Soap of Cod-liver Oil.

℞. Cod-liver oil, two ounces.
Caustic soda, two drachms.
Water, five drachms.

Dissolve the soda in the water, and mix the solution with the oil. *Deschamps.*

Ioduretted Soap of Cod-liver Oil.

℞. Soap of cod-liver oil, one ounce.
Iodide of potassium, one drachm.
Water, one drachm.

Dissolve the iodide in the water, and add it to the soap. *Deschamps.*

Soap with Sulphur.

℞. Soap,
Sulphur, each, four ounces.
Oil of bergamot, half a drachm.
Water, sufficient.

Beat together. As an application in itch. *Frank.*

Itch Ointment.

℞. Brown soap, one ounce.
Common salt,
Sulphur, each, half an ounce.
Alcohol, one fl. drachm.
Vinegar, two fl. drachms.
Chlorinated lime, half a drachm.

Rub well together. One-fourth to be used night and morning, as a friction. It is effectual, cheap, and inoffensive. *Emory.*

SARSAPARILLA.

Sarsaparilla.

This is the officinal name for the roots of several species of *Smilax* found in Mexico and various parts of South America. These roots are known in commerce by the names of the places from whence they are shipped, as Para, Honduras, Jamaica, Vera Cruz, etc.

Sarsaparilla, as found in commerce, is in packages, composed of dried roots, several feet in length, about the thickness of a quill, more or less wrinkled, of an ash-gray to a dark-brown color externally, and white to brownish within. The odor is slight but peculiar, the taste is at first mucilaginous, but finally somewhat acrid. It is considered alterative and tonic, but its real action is not well understood. The dose, in powder, is half a drachm to a drachm, three or four times a day.

Powder of Sarsaparilla and Peruvian Bark.

℞. Powdered sarsaparilla, one ounce.
" Peruvian bark, three drachms.
Carbonate of sodium, two drachms.

Mix, and divide into sixteen powders. One, thrice a day, as an alterative. *Cline.*

Infusion of Sarsaparilla.

℞. Sarsaparilla, bruised, one ounce.
Boiling water, one pint.

Digest for two hours, in a covered vessel, and strain. *U. S. Ph.* 1850.

One to four fl. ounces, three times a day.

Alkaline Infusion of Sarsaparilla.

℞. Sarsaparilla, bruised, twelve ounces.
Liquorice root, bruised, one ounce and a half.
Solution of potassa, one fl. ounce and a half.
Boiling water, five pints and a half.

Macerate for twenty-four hours, and strain. Dose, from eight fl. ounces to one pint daily. As an alterative. *St. Geo. Hosp.*

Decoction of Sarsaparilla.

℞. Jamaica sarsaparilla, cut, two ounces and a half.
Distilled water, thirty ounces.

Boil for one hour and obtain, after straining, twenty fl. ounces of liquid. Dose, two to ten fl. ounces. *Brit. Ph.*

Dose, four to six fl. ounces a day.

Compound Decoction of Sarsaparilla.

℞. Sarsaparilla, sliced and bruised, six troyounces.
Bark of sassafras, sliced,
Guaiacum wood, rasped,
Liquorice root, bruised, each, one troyounce.
Mezereon, sliced, three drachms.
Water, four pints.

Boil for fifteen minutes, then digest in a covered vessel at about 200° for two hours, strain, and add water through the strainer to make four pints. *U. S. Ph.*

Brit. Ph. has the same ingredients, in somewhat different proportions.

As an alterative and diaphoretic, in sec-

ondary syphilis, cutaneous affections, etc. Dose, four to six fl. ounces three times a day.

Feltz's Decoction of Sarsaparilla.

℞. Sarsaparilla, bruised, three ounces.
Isinglass, half an ounce.
Crude antimony (tied in a rag), three drachms.
Water, five pints.

Boil to two pints and a half, and strain. *Beasley.*

Vinache's Decoction of Sarsaparilla.

℞. Sarsaparilla, bruised,
China root, bruised,
Guaiacum wood, rasped,
each, one ounce and a half.
Crude antimony (in a rag), two ounces.
Water, six pints.

Macerate for twelve hours, boil to three pints, and add

Sassafras bark, sliced,
Senna, each, half an ounce.

Infuse for an hour, strain, let settle, and decant. *Foy.*

Lisbon Diet Drink.

℞. Guaiacum wood, rasped, one oz.
Sarsaparilla, bruised, three ounces.
Mezereon, sliced, half an ounce.
Crude antimony (in a rag), two ounces.
Water, twelve pints.

Boil down to eight pints, and add

Red saunders, rasped,
White sandal, rasped,
each, three ounces.
Rosewood, rasped,
Sassafras bark, sliced,
each, one ounce.
Liquorice root, sliced, half an ounce.

Infuse for four hours, strain, and add syrup according to taste. *Foy.*
Dose, a pint to two pints a day.

℞. Sarsaparilla, bruised, four ounces.
Dried walnut-peel, four ounces.
Guaiacum, rasped, one ounce and a half.
Crude antimony (in a rag), half an ounce.
Water, four pints.

Boil down to three pints. *Pearson.*

Zittman's Decoction.

℞. Sarsaparilla, cut, twelve and a half troyounces.
Water, three hundred and twenty-five troyounces.

Digest for twenty-four hours, and add

Alum,
Sugar, each, six drachms,

inclosed in a linen rag. Heat by a steam-bath, in a covered vessel, for three hours, adding towards the close,

Anise,
Fennel, each, half an ounce.
Senna, three ounces.
Liquorice root, one ounce and a half.

Express, strain, and after several hours decant. It should weigh three hundred and twelve troyounces. Put aside as *Strong decoction.* Add to the dregs of the strong decoction,

Sarsaparilla, bruised, fifty drachms.
Water, three hundred and twenty-five troyounces.

Heat by a steam-bath, in a covered vessel, for three hours, adding towards the close,

Lemon-peel,
Cinnamon,
Cardamom,
Liquorice root, } each, three drachms.

Express, strain, and decant; it should weigh three hundred and twelve troyounces; label, *Weak decoction.* To be given freely in the treatment of syphilitic and cutaneous affections, in chronic rheumatism, etc. *Ph. Germ.*

Jauperand's Decoction.

℞. Bruised sarsaparilla,
" China root, } each, two ounces.
Crude antimony,
Carbonate of potassium, one drachm.
Senna,
Sassafras, sliced, each, one ounce.
Rhubarb,
Peruvian bark,
each, half an ounce.
Water, two gallons.

Boil by a gentle fire for eight hours, till twelve pints of decoction are obtained. Let stand for some time, and strain. Advised in scrofula, two fl. ounces three times a day. *Bories.*

Extract of Sarsaparilla.

℞. Sarsaparilla, in coarse powder, one pound.
Diluted alcohol, four pints.

Make a tincture by displacement, filter, distil off the alcohol, and evaporate to the consistence of an extract. *U. S. Ph.* 1850.

Dose, from ten to twenty grains, three or four times a day.

Fluid Extract of Sarsaparilla.

℞. Sarsaparilla, in powder, No. 50, sixteen troyounces.
Glycerin,
Water, each, four fl. ounces.
Alcohol, eight fl. ounces.

Moisten the powder with four fl. ounces of the mixed liquids, pack firmly in a percolator, add the remaining mixture, and macerate for four days. Then with diluted alcohol displace twenty-six fl. ounces, reserving the first ten, add to the remainder four fl. ounces of glycerin, evaporate carefully to six fl. ounces, and mix with reserved portion. *U. S. Ph.*

℞. Jamaica sarsaparilla, cut, sixteen ounces.
Water, at 160°, fourteen pints (imp.).
Alcohol, one fl. ounce.

Digest the sarsaparilla twice, using half the water each time, for six hours, express, filter, evaporate by a water-bath to seven fl. ounces, or until the sp. gr. is 1.13; when cold add the alcohol. *Brit. Ph.*

Dose, one to two fl. drachms.

Compound Fluid Extract of Sarsaparilla.

℞. Sarsaparilla, in powder, No. 50, sixteen troyounces.
Liquorice root, in powder, No. 50,
Sassafras bark, in powder, No. 50, each, two troyounces.
Mezereon, in powder, No. 50, six drachms.
Alcohol, eight fl. ounces.
Glycerin,
Water, each, four fl. ounces.

Mix the liquids, moisten the mixed powders with four fl. ounces, pack firmly in a percolator, and macerate with the remaining liquid for four days; then, with diluted alcohol, obtain two pints of percolate, reserving the first twelve fl. ounces; add four fl. ounces of glycerin to the remainder, carefully evaporate to six fl. ounces and mix with reserved portion. *U. S. Ph.*

Dose, one fl. drachm, three or four times a day.

Essence of Sarsaparilla.

℞. Sarsaparilla, bruised, ten ounces.
Distilled water, six pints.

Macerate at a temperature of 120° for six hours and strain; repeat with same quantity of water. Mix the liquors, and evaporate in china vessels at 160°.

If reduced to ten fl. ounces (or to nine fl. ounces, with one fl. ounce of spirit added), one fl. drachm mixed with seven fl. drachms is equal to the decoction of usual strength. If reduced to five fl. ounces, one fl. drachm is equal to two fl. ounces of decoction. *Hening.*

℞. Alcoholic extract of sarsaparilla, one pound.
Sherry wine, three pints.

Dissolve and filter. Half a fl. ounce to one fl. ounce, mixed with a quart of water, is equal to the decoction. *Béral.*

Compound Essence of Sarsaparilla.

℞. Sarsaparilla, bruised, eight ounces.
Boiling water, sufficient

to exhaust the root, by successive macerations; unite the liquors, and evaporate to ten fl. ounces; strain, and add, when cool,

Alcohol (.842),
Tincture of guaiacum, each, half a fl. ounce.
White wine, one fl. ounce.
Essence of sassafras, twelve drops.
Extract of liquorice, two drachms.

Filter. Dose, a spoonful, morning and evening, in some convenient vehicle. *Cadet.*

Syrup of Sarsaparilla.

℞. Sarsaparilla, cut, ten parts.

Exhaust, by digesting, for twelve hours, twice with sufficient water, evaporate the clear liquid by a water-bath until reduced to sixteen parts, clarify with white of egg, strain, and dissolve

Sugar, twenty parts.

It has the specific gravity of 1.27. *Paris Codex.*

℞ Alcoholic extract of sarsaparilla, six ounces.
Hot water, four pints.

Dissolve, filter while hot, strain, and add

Sugar, eight pounds.

Dissolve whilst hot. *Paris Codex*, 1837.

Each fl. ounce is equal to fifteen grains of the extract.

Sarsaparilla Syrup for Mineral Water.

℞ Sarsaparilla,
Liquorice root, each, finely bruised, two pounds (av.).
Sugar, thirty pounds (av.).
Oil of anise, } each, forty drops.
" wintergreen, }
" sassafras, }
" cinnamon, five drops.
Water, sufficient.

Digest the roots in two gallons of warm water, for twelve hours; then transfer to a percolator, and pass two gallons of infusion. In this dissolve the sugar by the aid of heat, and to the syrup, when cool, add the oils, previously rubbed up with a little sugar. *A. Smith.*

℞ Sarsaparilla, bruised,
Liquorice root, bruised, each, one pound.
Cinnamon, bruised,
Sassafras root, bruised, each, six ounces.
Cloves, }
Anise, } each, two ounces.
Coriander, }
Red saunders,
Cochineal, each, one ounce and a half.
Alcohol, two pints.
Water, two gallons.

Digest together for four days, strain, and make a syrup with twenty-seven pounds (av.) of sugar. *A. Smith.*

Compound Syrup of Sarsaparilla.

℞ Sarsaparilla, in powder, No. 50, twenty-four troyounces.
Guaiacum wood, in powder, No. 50, three troyounces.
Pale rose, } each, in powder No. 50, two troyounces.
Senna, }
Liquorice root, }
Oil of sassafras,
" anise, each, five minims.
" gaultheria, three minims.
Sugar, ninety-six troyounces.
Water, one pint.
Diluted alcohol, sufficient.

Macerate the first five ingredients in three pints of the alcohol for four days, transfer to a percolator, and, with diluted alcohol, obtain six pints of tincture; evaporate this to three pints, add the water, filter, dissolve in it the sugar, and strain while hot. Rub the oils with a small portion of the syrup, and incorporate with the remainder. *U. S. Ph.*

℞ Sarsaparilla, two pounds.
Bittersweet,
Pipsissewa, each, half a pound.
Guaiacum,
Liquorice root, each, four ounces.
Sassafras,
Partridge-berry-leaves, each, two pounds.
Sugar, twelve pounds.

Reduce the ingredients to coarse powder, macerate them in diluted alcohol for two days, put in a displacement apparatus, and displace slowly until two gallons of liquid have passed. Evaporate on a water-bath till reduced to six pints, then add the sugar, and form a syrup. *Staples.*

Dose, half a fl. ounce three or four times a day.

Syrup of Laffecteur.

℞ Sarsaparilla, bruised,
Marsh-reed grass, each, thirty ounces.
Borage flowers, eight ounces.
Senna,
White roses, each, two ounces.
Sugar,
Honey, each, six pounds.
Water, eighteen pints.

Boil the first two ingredients in half the water for an hour, strain off the decoction, and repeat the process with the remainder of the water, and boil two hours; towards close, add the senna, rose leaves, and borage; strain, mix the decoctions, add the sugar and honey, and boil to the consistence of syrup. Dose, six tablespoonfuls, early in the morning. *Ellis.*

℞ Sarsaparilla, twenty-four parts.
Guaiacum wood, } each, sixteen parts.
Sassafras root, }
Chira root, }
Yellow cinchona, eight parts.
Anise, three parts.

Digest the cut and bruised materials for several hours with

Hot water, two hundred and fifty parts.

Express, filter, and evaporate to eighty parts; then dissolve in the liquid

Sugar, one hundred and thirty parts.

Ph. Germ.

Dose, a tablespoonful several times daily.

Syrup of Gesnouin.

℞ Syrup of sarsaparilla, four pounds.
" senna, three ounces.
Extract of borage, five ounces.
Conserve of elder berries, one ounce.

Mix, with heat. Four to six spoonfuls, early in the morning, using the infusion of sarsaparilla for a drink. *Foy.*

Sarsaparilla Beer.

℞ Sarsaparilla, bruised, two pounds.
Bark of guaiacum, powdered, eight ounces.
Guaiacum wood, rasped, Anise, Liquorice root, each, four ounces.
Mezereon, bark of root, two ounces.
Molasses, two pounds.
Cloves, bruised, half an ounce.
Boiling water, four gallons.

Mix, and shake thrice a day. Let ferment; when fully fermented, to be taken in doses of a small tumblerful two or three times a day. *Hancock.*

SASSAFRAS.

Sassafras.

Two parts of the Sassafras, *Laurus sassafras* (*Sassafras officinale*), are officinal; the pith of the young braches and the bark of the root.

Sassafras is a medium-sized tree, found in most parts of the United States, growing in woods and open places, flowering before the appearance of the leaves.

Sex. Syst. Enneand. monog. *Nat. Syst.* Lauraceæ.

Nees, Pl. Med. i. 131. Griffith, Med. Bot. 551.

The pith is in slender, cylindrical pieces, very spongy and light, with a mucilaginous and somewhat aromatic taste, affording a clear mucilage on the addition of water. The bark is in small fragments, of a reddish-brown color, brittle, of a fragrant odor, and a pleasant aromatic taste. The European pharmacopœias recognize the entire root. It is stimulant and diaphoretic.

Infusion of Sassafras Bark.

℞ Sassafras bark, half an ounce.
Boiling water, one pint.

Macerate for six hours, and strain. As a stimulating diaphoretic. *Niemann.*

Compound Infusion of Sassafras Bark.

℞ Sassafras bark, half an ounce.
Liquorice root, two drachms.
Boiling water, one pint.

Infuse. One-half, morning and evening. In scrofulous complaints. *Hufeland.*

℞ Cut sassafras bark, ninety grains.
Mezereon, two drachms.
Taraxacum, three ounces.
Boiling water, sufficient

to obtain twenty fl. ounces. Dose, two to three tablespoonfuls, in chronic rheumatism. *Waring.*

Infusion of Sassafras Pith.

℞ Sassafras pith, two drachms.
Water, one pint.

Macerate for three hours, and strain. As a soothing application in ophthalmia, and as a demulcent drink in diseases of the bowels, lungs, and bladder. *U. S. Ph.*

Tincture of Sassafras.

℞ Sassafras bark, sliced, one part.
Alcohol, six parts.

Macerate for three days, express, and filter. Dose, one fl. drachm. *Béral.*

Compound Tincture of Sassafras.

℞ Sassafras bark, bruised, four ounces.
Sage, two ounces.
Nutmeg, bruised, one ounce.
Cinnamon, bruised, half an ounce.
Star anise, three drachms.
Alcohol, two pints.

Macerate for three days, express, and filter. *Wirt. Ph.*

As a stomachic and carminative.

Oil of Sassafras.

℞ Bruised sassafras bark, at will.
Water, sufficient.

Distil, and collect the oil which sinks to the bottom of the product. *Guibourt.*

Dose, two to ten drops, as a carminative and stimulant.

SCAMMONIUM.

Scammony.

This is the resinous exudation of the root of *Convolvulus scammonia*, a twining perennial plant, a native of Syria. It has a large, succulent root, affording a milky juice, which concretes by exposure to the air. The root is likewise officinal in several European pharmacopœias.

Sex. Syst. Pentand. monog. *Nat. Syst.* Convolvulaceæ.

Linn. Sp. Pl. 218. Griffith, Med. Bot. 477.

The best, or virgin scammony, is light, resinous when broken, friable, not effervescing with an acid, of various shades of color, from dark ash to dark olive; forming an emulsion with water. The odor is peculiar and unpleasant, resembling old cheese; the taste is bitterish and acrid. It is an active purgative, causing pain, and usually operating with harshness when given alone, but much milder in combination. The dose is from five to fifteen grains.

Powder of Scammony and Cream of Tartar.

℞ Powdered scammony,
Cream of tartar, equal parts.

Mix. *Ed. Ph.*

Dose, fifteen to thirty grains.

Powder of Scammony and Soot.

℞ Powdered scammony, one drachm.
Soot, one drachm and a half.
Powdered resin, two drachms.

Mix. Dose, twenty to thirty grains. *Beasley.*

Compound Powder of Scammony.

℞ Scammony, in powder, four ounces.
Jalap, in powder, three ounces.
Ginger, in powder, one ounce.

Mix thoroughly and pass through a fine sieve. Dose, ten to twenty grains. *Brit. Ph.*

Pills of Scammony.

℞ Powdered scammony, fifteen grains.
Sugar, ten grains.

Rub together, and add

Oil of caraway, four minims.

Make ten pills. Dose, three pills. *Copland.*

Pills of Scammony and Ox Gall.

℞ Powdered scammony, two drms.
Inspissated ox gall, three drms.
Extract of gentian, half an ounce.

Mix, and make one hundred and sixty-two pills. Dose four to six a day. *Cadet.*

Compound Pills of Scammony.

℞ Powdered scammony,
Extract of henbane,
Powdered gamboge,
Compound extract of colocynth, } each, twelve grains.
Soap,
Water, sufficient.

Beat into mass, and form twelve pills. Dose, two to three. *Guy's Hosp.*

℞ Scammony, twenty-four grains.
Aloes,
Gamboge, each, twelve grains.
Ginger, one scruple.
Molasses, sufficient.

Rub together, and divide into twelve pills. *St. Bart.'s Hosp.*

℞ Scammony,
Calomel, each, eight grains.
Gamboge, four grains.
Confection of rose, sufficient.

Mix, and make four pills. *Jourdain.*

Confection of Scammony.

℞ Scammony, in fine powder, three ounces.
Ginger, in fine powder, one ounce and a half.
Oil of caraway, one fl. drachm.
" cloves, half a fl. drachm.
Syrup, three fl. ounces.
Clarified honey, one ounce and a half.

Rub the whole into a uniform mass, adding the oils last. Dose, twenty to thirty grains. *Brit. Ph.*

℞ Powdered scammony,
" jalap, each, two drachms.
" squill, one drachm and a half.
" resin of jalap, half a drachm.
Syrup of buckthorn, sufficient.

Mix, and form confection. A hydragogue purgative, in dose of ten grains to a scruple. *Foy.*

Resin of Scammony.

℞. Scammony, in fine powder, six troyounces.

Digest with successive portions of boiling alcohol until exhausted; reduce to a syrupy consistence by distillation, add to a pint of water, wash the precipitate thoroughly, and dry. *U. S. Ph.*

℞. Scammony root, in coarse powder, eight ounces.

Exhaust with alcohol by digestion and percolation; add to the tincture four fl. ounces of water, recover the spirit by distillation, transfer the residue while hot to an open dish, wash the resin with hot water, and dry. *Brit. Ph.*

Dose, three to eight grains.

Emulsion of Scammony.

℞. Resin of scammony, four grains.
Unskimmed milk, two fl. ounces.

Triturate the resin with a little of the milk, and gradually add the rest. *Brit. Ph.*

Half a fl. ounce or more for a child.

Compound Emulsion of Scammony.

℞. Scammony, fifteen grains.
Sugar, four drachms.

Triturate, and add gradually

New milk, four fl. ounces.
Cherry-laurel water, seventy minims.

Dose, two fl. ounces or more. *Paris Codex.*

Scammony Mixture.

℞. Resin of scammony, twelve grains.
Spirit of rosemary, one fl. drachm.
Orange-flower water,
Syrup of peach-flowers, each, one fl. ounce.

Mix. *Cadet.*

Scammony Oil.

℞. Powdered scammony, one scruple.
Oil of almonds, one ounce.

Rub well together. Dose, half an ounce. *Van Mons.*

Elixir of Scammony.

℞. Scammony, two drachms.
Proof spirit, eight fl. ounces.

Heat, and then set fire to the spirit, and add

Sugar, four ounces.

When it is dissolved, extinguish the flame, and add

Syrup of violets, two fl. ounces.

Filter. It will give ten ounces, containing twelve grains of scammony to the ounce. *Guibourt.*

Soap of Scammony.

℞. Scammony, one drachm.
Soap, two drachms.
Alcohol (.874), two fl. ounces.

Dissolve by means of a water-bath, filter, and evaporate to a pilular consistence. *Guibourt.*

Purgative Pastilles.

℞. Scammony, six grains.
Tincture of senna, forty drops.
Carbonate of magnesium, five scruples.
White sugar, eight scruples.
Powdered liquorice, eight grains.
Gum tragacanth, five grains.
Oil of anise, one drop.
Syrup of violets, sufficient

to make eight pastilles. These are known as *Pastilles de Santé*, and are useful in cases of acid eructation and flatulence. One or two, taken early in the morning, act as a laxative; by repeating the dose every quarter of an hour, full purgation ensues. *Delvincourt.*

Purgative Chocolate.

℞. Chocolate, five drachms.
Scammony resin, six grains.
Calomel, one and a half grains.
Sugar, half a drachm.

Triturate the scammony and sugar together in a mortar; then add the calomel, and, when thoroughly mixed, add the chocolate, previously softened by the heat of a water-bath. Make into forms. To be taken dry, and followed by some bland liquid. *Mialhe.*

SCILLA.

SQUILL

Is the bulb of *Scilla maritima* (*Urginea scilla*), a perennial plant growing near the sea-coast of the countries bordering on the Mediterranean. The bulb is large, pyriform, and tunicated; there are two varieties, the red and the white, but identical in their medical qualities.

Sex. Syst. Hexand. monog. *Nat. Syst.* Liliaceæ.

Linn. Sp. Pl. 442. Griffith, Med. Bot. 652.

The bulb is sliced and dried for use; in this state it is in white, or yellowish-white, semitransparent pieces, which are flexible when moist, but brittle when dry; of a mucilaginous, bitter taste, but scarcely any odor.

Squill is expectorant, diuretic, and in large doses emetic, and even purgative. Dose, as a diuretic or expectorant, one grain two or three times a day; as an emetic, six to twelve grains.

Powder of Squill and Nitre.

℞ Powdered squill, six grains.
" nitre, one drachm.

Mix, and divide into six powders. One, three times a day, in sugar and water. As a diuretic. *Ellis.*

Powder of Squill and Ipecacuanha.

℞ Powdered squill, ten grains.
" ipecacuanha, eighteen grains.

Mix, and divide into sixteen powders. One, every two hours, in chronic catarrh. *Foy.*

Powder of Squill and Cream of Tartar.

℞ Powdered squill, one drachm.
Cream of tartar, nine drachms.

Mix. Twenty to thirty grains two or three times a day, as a diuretic. *Guy's Hosp.*

Powder of Squill and Sulphur.

℞ Powdered squill, one part.
Sulphur, two parts.
Powdered sugar, three parts.

Mix. Dose, from five to twenty grains, according to age, in catarrhs. *Guibourt.*

Powder of Squill and Calomel.

℞ Powdered squill, three grains.
Calomel,
Powdered gamboge,
each, half a grain.

Mix. To be taken in the evening. As a diuretic. *A. Cooper.*

Compound Powder of Squill.

℞ Powdered squill,
" foxglove,
each, one grain.
Oil of juniper, two drops.
Borate of sodium,
Powdered liquorice,
each, one scruple.
Powdered cinnamon, two grains.

Mix. To be repeated two or three times a day, as a diuretic. *Radius.*

℞ Powdered squill,
" foxglove,
each, two grains.
Resin of jalap, six grains.
Acetate of potassium, thirty grains.
Sulphate of sodium, two drachms.

Mix. To be taken early in the morning, as a purgative and diuretic. *Bories.*

Pills of Squill and Calomel.

℞ Calomel,
Powdered squill,
each, twelve grains.
Conserve of roses, sufficient.

Mix, and form twelve pills. One, night and morning. In dropsy, arising from visceral derangement. *Ellis.*

Pills of Squill and Ammoniac.

℞ Powdered squill, thirty grains.
Ammoniac, one drachm and a half.
Extract of hemlock, thirty grains.

Mix, and form thirty pills; two, twice a day. In asthma and chronic catarrh. *Ellis.*

Pills of Squill and Croton Oil.

℞ Compound pills of squill, two scruples.
" extract of colocynth, two scruples.
Croton oil, six minims.

Mix, and form eighteen pills. Three, twice a week, in dropsy. *Selwyn.*

Pills of Squill and Ipecacuanha.

℞ Powdered squill, sixteen grains.
" ipecacuanha, eight grs.
Extract of opium, one grain.
Butter of cacao, thirty grains.
Syrup of gum, sufficient.

Beat together, and make sixteen pills. One, three times a day, as an expectorant. *Cadet.*

℞ Powdered squill,
" ipecacuanha,
each, twelve grains.

Extract of dandelion, three scruples.
Blue pill, ten grains.
Simple syrup, sufficient.

Mix, and make twenty-four pills. Two, to be taken morning and evening, in dropsy. *Ainslie.*

Pills of Squill and Henbane.

℞. Powdered squill, half a drachm.
Extract of henbane, two scruples.
Myrrh, one drachm and a half.
Water, sufficient.

Beat together, and make thirty pills. Two, morning and evening, as an expectorant. *Paris.*

Pills of Squill and Digitalis.

℞. Powdered squill,
" digitalis,
each, thirty grains.
" iron, sixty grains.

Mix, and make forty pills. Dose, two to six daily, in albuminuria. *Chomel.*

℞. Powdered squill,
" digitalis,
each, twelve grains.
Blue mass, thirty grains.

Mix, and form twelve pills. One, three or four times daily, in dropsy, anasarca, etc. *Baillie.*

Compound Pills of Squill.

℞. Calomel, three grains.
Fresh squill,
Ammoniac, each, one scruple.
Dover's powder, half a drachm.
Conserve of roses, sufficient.

Make mass, and divide into thirty pills. One, three or four times a day. In troublesome catarrh. *Latham.*

℞. Powdered squill, half a drachm.
Calomel, twenty-four grains.
Tartar emetic, six grains.
Powdered opium, eighteen grains.
Syrup, sufficient.

Beat together, and make twenty-four pills. One at night, in catarrh. *Ellis.*

℞. Powdered squill, twelve grains.
" ginger,
" ammoniac,
each, twenty-four grains.
Soap, in powder, thirty-six grs.
Syrup, sufficient.

Beat into mass, and form twenty-four pills. *U. S. Ph.*

℞. Powdered squill, one ounce and a quarter.
" ginger, } each,
" ammoniac, } one ounce.
" soap, }
Molasses, sufficient.

Beat into a mass. *Brit. Ph.*

Similar to the preceding, but containing about twice the proportion of squill.

Five to ten grains, three or four times a day, as a stimulant expectorant.

℞. Powdered squill, fifteen grains.
" ammoniac,
one drachm and a half.
" seneka, two drachms.
Golden sulph. of antimony,
half a drachm.
Extract of dandelion, sufficient.

Mix, and make pills of two grains. Diuretic. *Berends.*

℞. Powdered squill, twenty-four grs.
Calomel, sixteen grains.
Soap, one drachm and a half.
Galbanum, two drachms.
Extract of dandelion,
three drachms and a half.
Essence of orange, sufficient.

Mix, and make pills of two grains. Three or four a day, as purgative and diuretic. *Pideret.*

Compound Syrup of Squill.

℞. Squill, in powder, No. 50,
Seneka, in powder, No. 50,
each, four troyounces.
Tartar emetic, forty-eight grains.
Sugar, forty-two troyounces.
Diluted alcohol,
Water, each, sufficient.

Mix squill and seneka, moisten with half a pint of the alcohol, and macerate for four days; then obtain by percolation one pint of tincture. Boil for a few minutes, evaporate by a water-bath to half a pint, add fourteen fl. ounces of boiling water, and filter. Dissolve in this the sugar, heat to boiling, and strain; lastly, dissolve the tartar emetic, and add through the strainer enough water to make the measure three pints. *U. S. Ph.*

Known as *Coxe's Hive Syrup.* Dose, as an expectorant, twenty to thirty drops, for adults; for children, five to ten drops;

in croup, ten drops to a fl. drachm, repeated till vomiting is produced.

℞. Oxymel of squill, one fl. ounce and a half.
Syrup of ipecacuanha,
" poppies, each, two fl. ounces.
" orange-flowers, half an ounce.

Mix. Dose, half to one fl. ounce, in hooping-cough. *Cadet.*

Wine of Squill.

℞. Squill, three ounces.
Malaga wine, fifty ounces.

Macerate for ten days, express, and filter. *Paris Codex.*

Compound Wine of Squill.

℞. Bruised squill, one ounce.
" orange-peel,
" calamus, each, three drachms.
" juniper berries, two drachms.
White wine, four pints.

Macerate for three days, express, filter, and add

Oxymel of squill, two fl. ounces.

Mix.

℞. Dried squill, bruised, Rhubarb, Juniper berries, each, one drachm.
Cinnamon, three drachms.
Zedoary, two drachms.
Carbonate of potassium, one drachm and a half.
White wine, two pints.

Macerate, express, and filter. Dose, two to four small wineglassfuls a day, as a diuretic. *Taddei.*

Bitter Wine of Squill.

℞. Squill,
Root of swallowwort, each, half an ounce.
Peruvian bark, Canella, Lemon-peel, each, two ounces.
Angelica, half an ounce.
Wormwood,
Balm, each, one ounce.
Juniper berries,
Mace, each, half an ounce.
White wine, eight pints.

Digest by a gentle heat, for four days, express, and filter. As a diuretic, in doses of one to three fl. ounces. *Cottereau.*

Tincture of Squill.

℞. Squill, in powder, No. 40, four troyounces.
Diluted alcohol, sufficient.

Obtain by percolation two pints. *U. S. Ph.*

The tincture of *Brit. Ph.* is of nearly the same strength; *Paris Codex* and *Ph. Germ.* order one part of squill to five parts of 60 per cent. alcohol.

Dose, as diuretic or expectorant, twenty to forty drops.

Alkaline Tincture of Squill.

℞. Squill, two ounces.
Solution of potassa, two fl. drachms.
Diluted alcohol, twelve fl. ounces.

Macerate for three days, express, and filter. *Van Mons.*

Tincture of Squill and Elaterium.

℞. Tincture of squill,
Vinegar of colchicum, each, two fl. drachms.
Spirit of nitrous ether,
Elaterium, one grain.

Mix. Dose, fifteen minims to one fl. drachm. *St. Bart.'s Hosp.*

Compound Tincture of Squill and Benzoin.

℞. Squill, Orris root, Elecampane, each, three ounces.
Benzoin, two drachms.
Liquorice root, Anise, Myrrh, each, four scruples.
Ammoniac, two scruples.
Saffron, eighteen grains.
Diluted alcohol, one pint, six fl. ounces.

Macerate for fifteen days, express, and filter. Celebrated as *Wedel's elixir.* Dose, forty to sixty drops, in catarrh, asthma, etc. *Cadet.*

Ethereal Tincture of Squill.

℞. Squill, one ounce and a half.
Muriatic ether,
Spirit of juniper, each, half a pound.
Water, sufficient.

Distil one pound. Dose, ten to twenty drops, in water, as a diuretic. *Augustin.*

℞. Bruised squill, four ounces.
Spirit of nitrous ether, two pints.

Digest for eight days, and filter. Dose, half a fl. drachm, as an expectorant and diuretic. *Mettauer.*

Mixture of Syrup of Squill.

℞. Syrup of squill, half a fl. ounce.
Paregoric elixir, two fl. drachms.
Antimonial wine, one fl. drachm.
Powdered gum Arabic, half a drachm.
Distilled water, three fl. ounces.

Mix. A teaspoonful every two or three hours, as an expectorant; suited to children. *Ellis.*

℞. Syrup of squill,
Peppermint water, each, two fl. ounces.
Paregoric elixir,
Compound spirit of lavender, each, half a fl. ounce.
Syrup, one fl. ounce.

Mix. A spoonful three or four times a day. A valuable expectorant. *Christison.*

Diuretic Mixture.

℞. Oxymel of squill, half a troyounce.
Peppermint water, one troyounce.
Hyssop water, three troyounces.
Spirit of nitrous ether, half a drachm.

Mix. *Paris Codex.*

Mixture of Oxymel of Squill and Valerian.

℞. Powdered valerian, two drachms.
Oxymel of squill, one fl. ounce.
Laudanum, twenty drops.
Water, one fl. ounce.

Mix. A teaspoonful every hour, after an emetic, in croup. *Kimbel.*

Mixture of Extract of Squill and Rhubarb.

℞. Extract of squill, sixteen grains.
Liquid acetate of potassium, half an ounce.
Parsley water, four fl. ounces.
Syrup of rhubarb, one fl. ounce.

Mix. As a diuretic. *Radius.*

Mixture of Oxymel of Squill and Ammoniac.

℞. Oxymel of squill, six fl. drachms.
Ammoniac, one drachm.
Extract of elecampane, twenty-four grains.
Syrup of hyssop, six fl. drachms.
Hyssop water, four fl. ounces.

Mix. A tablespoonful every hour, as an expectorant. *Foy.*

Mixture of Vinegar of Squill.

℞. Vinegar of squill, one fl. drachm.
Barley water, five fl. ounces.
Syrup of saffron, one fl. ounce.

Mix. A tablespoonful three or four times a day, in troublesome cough. *Ainslie.*

Mixture of Vinegar of Squill and Ammonia.

℞. Vinegar of squill, two fl. drachms.
Solution of acetate of ammonia,
Compound spirit of horseradish, each, one fl. ounce and a half.
Diluted pimento water, four fl. ounces and a half.

Mix. Dose, two fl. ounces three times a day. As a diuretic. *St. Bart.'s Hosp.*

Mixture of Oxymel of Squill and Ipecacuanha.

℞. Ipecacuanha, one drachm and a half.
Lemon-peel, two drachms.
Cream of tartar, half an ounce.
Water, four fl. ounces.

Boil, strain, and add

Oxymel of squill, half a fl. ounce.

Mix well; as an expectorant. *Cadet.*

Mixture of Oxymel of Squill and Marsh Mallow.

℞. Oxymel of squill,
Syrup of marsh mallow,
Mucilage of gum Arabic, } equal parts.

Mix. As an expectorant; in spoonful doses. *Foy.*

Emulsion with Squill.

℞. Oil of almonds,
Mucilage of gum Arabic, each, one fl. ounce.

Wine of squill, eight fl. scruples.
" ipecacuanha, four fl. scruples.
Syrup of tolu, two fl. ounces.
Water of hyssop, four fl. ounces.
Water, eight fl. ounces.
Make an emulsion. *Béral.*

Ointment of Squill.

℞ Squill, three ounces.
Solution of potassa, sufficient.
Reduce to mucilage by boiling, and add
Lard, sufficient
to form an ointment. As a friction to indolent tumors. *Hufeland.*

Fluid Extract of Squill.

℞ Squill, in powder, No. 40, sixteen troyounces.
Glycerin, two fl. ounces.
Alcohol, fourteen fl. ounces.
Macerate in a percolator for four days; then with a mixture of two measures of alcohol and one of water, displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with reserved portion. *U. S. Ph.*
Each minim represents one grain of squill.

Extract of Squill.

℞ Squill, one pound.
Proof spirit, four pints.
Macerate for some days, express, strain, and filter; digest the residue with two pints of spirit, express, strain, and filter. Distil off the spirit, and evaporate to proper consistence. Dose, one to three grains.
Ph. Germ. and *Paris Codex.*

Acetic Extract of Squill.

℞ Bruised squill, one pound.
Acetic acid, three fl. ounces.
Distilled water, one pint.
Mix; digest with a gentle heat for forty-eight hours, express by strong pressure, and evaporate, without straining, to the proper consistence. Dose, half a grain. *Niblett.*

Electuary of Squill.

℞ Oxymel of squill, two fl. ounces.
Cream of tartar, three ounces.
Mix. Dose, two drachms. *Beasley.*

℞ Powder of squill and nitre, Ammoniac, Tartrate of potassium, each, two drachms.
Chloride of ammonium, one scruple.
Syrup of cinnamon, sufficient.
Mix. Dose, two drachms three times a day, in dropsy. *Radius.*

Vinegar of Squill.

℞ Bruised squill, four ounces.
Diluted acetic acid, sufficient.
Obtain by maceration for seven days, or by displacement, two pints. *U. S. Ph.*
The vinegar of *Brit. Ph.* is of about the same strength.

℞ Squill, cut small, one part.
Alcohol, one part.
Pure vinegar nine parts.
Macerate for three days, express lightly, and strain. *Ph. Germ.*
Diuretic and expectorant. Dose, thirty minims to a fl. drachm.

Oxymel of Squill.

℞ Vinegar of squill, twenty fl. ounces.
Clarified honey, thirty-two ounces (avoir.).
Mix, and evaporate by water-bath to the specific gravity 1.32. *Brit. Ph.*
Dose, half to two fl. drachms.

Honey of Squill.

℞ Squill, one part.
Boiling water, six parts.
Honey, twelve parts.
Infuse the squill in water for twelve hours, express, strain, evaporate to one-third, add honey and evaporate to the density 1.27.
Paris Codex.

Syrup of Squill.

℞ Vinegar of squill, one pint.
Sugar, twenty-four troyounces.
Mix, and form syrup.
U. S. Ph. and *Brit. Ph.*
As expectorant. Dose, about a fl. drachm.

Aromatic Syrup of Squill.

℞ Vinegar of squill, half a pound.
Syrup of cinnamon,
" ginger, each, one pound.
Mix. As a stimulating expectorant.
Swediaur.

SCOPARIUS.

Broom.

This is the fresh tops of the *Sarothamnus scoparius* (*Cytisus scoparius*), a shrub, native of many parts of Europe, and cultivated in this country, with numerous, bright-yellow flowers.

Sex. Syst. Diadelph. decand. *Nat. Syst.* Fabaceæ.

Link, enum. ii. 241. Griffith, Med. Bot. 233.

The officinal portion is the tops of the branches, but the seeds are also used. The branches have a bitter, nauseous taste, and a strong, peculiar odor. It is a diuretic and cathartic, and even emetic, and has been advantageously used in dropsy. The seeds have been recommended in the same complaint.

Decoction of Broom.

℞ Broom tops, one ounce.
Boiling water, one pint (imper.).

Boil for ten minutes, and strain. *Brit. Ph.*

Dose, two to four fl. ounces three times a day.

Compound Decoction of Broom.

℞ Broom tops,
Juniper tops, each, half an ounce.
Cream of tartar, two drachms and a half.
Water, one pint and a half.

Boil down to a pint, and strain. *Ed. Ph.*

℞ Broom tops, Juniper berries, Dandelion root, each, half an ounce.
Water, one pint and a half.

Boil down to a pint, and strain. *Lond. Ph.* 1836.

Dose, same as infusion.

Juice of Broom.

℞ Fresh broom tops, seven pounds.

Bruise in a stone mortar, press out the juice, and to every three measures of juice add one measure of alcohol; after several days, filter. Dose, one to two fl. drachms. *Brit. Ph.*

Extract of Broom.

℞ Tops of broom, at will.

Boil, in eight times their weight of water, down to one-half; express, let settle, and strain. Evaporate by vapor-bath to proper consistence. *Dub. Ph.* 1826.

Dose, a scruple to a drachm.

Conserve of Broom.

℞ Broom flowers, one part.
Sugar, two parts.

Rub together. Dose, a drachm to two drachms, in gout, rheumatism, etc. *Van Mons.*

Tincture of Broom Seed.

℞ Broom seed, two ounces.
Proof spirit, eight fl. ounces.

Macerate for ten days. Dose, one or two fluidrachms thrice daily. *Pearson.*

SCROPHULARIA NODOSA.

Figwort.

A semi-aquatic plant, native of many parts of Europe, flowering in July.

Sex Syst. Didyn. angios. *Nat. Syst.* Scrophulariaceæ.

Linn. Sp. Pl. 863. Griffith, Med. Bot. 518.

The leaves are the part used; they have a rank, unpleasant odor, and a bitter, disagreeable taste. They have been used as a tonic, diuretic, and anthelmintic, but are principally used as an external discutinent application.

Ointment of Figwort.

℞ Fresh leaves of figwort,
Prepared lard, each, two pounds.
" suet, one pound.

Boil till the leaves are crisp, express, and strain. *Dub. Ph.* 1826.

As an application to piles, painful swellings, and cutaneous eruptions.

Oleo-Infusion of Figwort.

℞ Leaves of figwort, three parts.
Olive oil, one part.

Infuse, express, and strain. Used as above. *Van Mons.*

SCUTELLARIA.

Scullcap.

Several species indigenous to this country have been used in medicine; the one recognized by the *U. S. Ph.* is *S. lateriflora.*

Sex. Syst. Didyn. Gymnosp. *Nat. Syst.* Labiatæ.

It is a smooth herb, growing in moist localities, with small blue flowers in leafy racemes; almost inodorous and tasteless. It was at one time asserted to have proved efficacious in hydrophobia; but appears to possess merely mild tonic properties. *S. pilosa* and *integrifolia* have a more decided bitter taste, and have been used somewhat as tonics.

SENEGA.

Seneka.

The officinal name for the root of *Polygala senega*, a native, perennial plant, found in most parts of the United States, on hill sides and in dry woods, flowering from June to August.

Sex. Syst. Diadelph. octand. *Nat. Syst.* Polygalaceæ.

Linn. Sp. Pl. 990. Griffith, Med. Bot. 225.

The root is contorted, knotted, tapering, branched, with a ridge or carina. It has a thick, resinous, grayish-yellow, cortical layer, which is the active portion. It has a peculiar, but unpleasant odor; and a mucilaginous, sweetish taste, which becomes acrid and irritating. Its action is very various, being emetic, sudorific, diuretic, and expectorant, and even emmenagogue and purgative. It is principally used as a stimulating expectorant and diuretic. The dose, in powder, is from ten to twenty grains, but it is seldom given in this form.

Compound Powder of Seneka.

℞ Powdered seneka, half an ounce.
Cream of tartar, six drachms.
Magnesia, two drachms.

Mix. A teaspoonful twice a day, in pannus of the eye. *Radius.*

Pills of Seneka.

℞ Powdered seneka, six drachms.
Extract of dandelion, sufficient.

Mix, and make pills of two or three grains. Six to twelve, three times a day, in hypopyon and pannus. *Radius.*

Infusion of Seneka.

℞ Seneka, bruised, half an ounce.
Boiling water, ten ounces.

Infuse for one hour in a covered vessel, and strain. *Brit. Ph.*

Dose, one to two fl. ounces.

Compound Infusion of Seneka.

℞ Seneka, two drachms.
Boiling water, six fl. ounces.

Infuse, strain, and add

Syrup of tolu, one fl. ounce.
Ammoniac, half a drachm.

Mix well. A tablespoonful every two hours. In catarrh. *Ellis.*

Decoction of Seneka.

℞ Seneka, bruised, one troyounce.
Water, sufficient.

Boil for fifteen minutes and strain to obtain one pint. *U. S. Ph.*

Dose, a tablespoonful every three hours.

℞ Seneka, bruised, one ounce.
Liquorice root, half an ounce.
Distilled water, one pint and a half.

Boil down to a pint, and strain. Dose, a tablespoonful, in pectoral diseases. *Ellis.*

℞ Bruised seneka, one ounce.
Orange-peel, half an ounce.
Water, one pint.

Simmer by a slow fire, till reduced one-third; add orange-peel; cover till cold, then strain. Four fl. ounces during the day, at first, and then increase, as an emmenagogue. *Chapman.*

Tincture of Senega.

℞ Senega, in coarse powder, two and a half ounces.
Proof spirit, sufficient.

Obtain by maceration and displacement twenty fl. ounces. Dose, half to two fl. drachms. *Brit. Ph.*

Syrup of Seneka.

℞ Seneka, in powder, No. 50, four troyounces.
Sugar, fifteen troyounces.
Diluted alcohol, two pints.

Displace the seneka with the alcohol, evaporate the tincture at or below 160° to half a pint, filter, dissolve the sugar, and strain while hot. *U. S. Ph.*

Dose, half to one or two fl. drachms, in pectoral complaints. It is about five times stronger than the next.

℞ Senega, cut, two parts.
Water, twenty-two parts.
Alcohol, three parts.

Macerate for two days, express, filter, and add

Sugar, thirty-six parts.

Dissolve. *Ph. Germ.*

Fluid Extract of Senega.

℞ Senega, in powder, No. 60, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Macerate the senega, properly packed in a percolator, for four days with the mixed liquids; then, with diluted alcohol, obtain

twenty-four fl. ounces of percolate; reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate carefully to two fl. ounces and mix with reserved portion. *U. S. Ph.*

Dose, ten to twenty minims.

Extract of Senega.

℞ Senega, in powder, No. 50, twelve troyounces.
Diluted alcohol, sufficient.

Obtain by percolation three pints of tincture; evaporate this by a water-bath to the proper consistence. *U. S. Ph.*

Dose, one to five grains. The extract of *Ph. Germ.*

Emulsion with Seneka.

℞ Bruised seneka, half an ounce.
Water, nine fl. ounces.

Boil down one-third, strain, and add

Camphor, one scruple.
Gum Arabic, two drachms.

Make an emulsion, and add

Compound tincture of ammonia, two fl. drachms.

A tablespoonful every two hours, as a stimulating expectorant. *Phœbus.*

Pectoral Jelly with Seneka.

℞ Bruised seneka, two drachms.
Water, twelve fl. ounces.

Boil down to nine fl. ounces, strain, and add

Isinglass, sufficient.
Syrup of orange flowers, one ounce.

Form a jelly. A tablespoonful occasionally. *Radius.*

Mixture with Seneka.

℞ Seneka, bruised, two drachms.
Water, sufficient

to obtain eight fl. ounces of strained decoction; add

Camphor, one drachm.

Mix. A tablespoonful occasionally. *Brera.*

℞ Infusion of seneka, four fl. ounces.
Syrup of ipecacuanha, one fl. ounce.
Oxymel of squill, three fl. drachms.
Tartar emetic, one grain and a half.

Mix. A tablespoonful every quarter of an hour, till vomiting is produced. In croup. *Jadelot.*

℞ Bruised seneka, one drachm and a half.
Boiling water, sufficient

to obtain four fl. ounces of the strained decoction; add

Antimonial wine, two fl. scruples.
Syrup of marsh mallow, one fl. ounce.

A small spoonful occasionally, in the second stage of croup, as an expectorant. *Wendt.*

℞ Spirit of nitrous ether, two fl. drachms.
Tincture of hyoscyamus, ninety minims.
Decoction of senega, three fl. ounces.
Camphor water, sufficient

for four fl. ounces. Mix. Dose, a fluid-ounce thrice daily, in palpitation arising from aortic disease. *Barlow.*

℞ Decoction of senega, two fl. ounces and a half.
Carbonate of ammonium, eight grains.
Tincture of squill, sixteen minims.
Syrup of tolu, three fl. drachms.

Mix. Dose, three fl. drachms every four hours for a child of two or three years, as an expectorant in croup. *West.*

Polygalic Acid.

℞ Seneka, in powder, sixteen ounces.
Alcohol (35° B.), six pints.
Ether, sufficient.
Purified animal charcoal, two ounces.

Boil the seneka in four pints of the alcohol for fifteen minutes; suffer it to cool, then throw the whole on a displacement filter, and when the liquid ceases to pass, add more alcohol, until six pints of tincture are obtained. Distil off the alcohol till of a syrupy consistence, wash this with ether, to remove fatty matter, and throw the residue into several times its bulk of concentrated alcohol. After standing for twenty-four hours, the polygallic acid will be precipitated as a light brown powder, which is to be collected on a filter, washed with cold, strong alcohol, and dried. It may be rendered more pure by boiling it with alcohol and the animal charcoal, filtering, and collecting the powder. *W. Procter, Jr.*

Syrup of Polygalic Acid.

℞. Polygalic acid, eight grains.
Boiling water, half a fl. ounce.
Syrup of gum Arabic,
one fl. ounce and a half.

Dissolve and mix.
Dose, a teaspoonful. *W. Procter, Jr.*

SENNA.

Senna.

Under this name is included the leaves of several species of *Cassia*, as *C. acutifolia*, *C. elongata*, *C. obovata*, *etc.*, forming what are termed Alexandria, Tripoli, India, and Mecca sennas. They are all perennial plants, growing in Africa and Asia.

Sex. Syst. Decand. monog. *Nat. Syst.* Fabaceæ.

Christison, Dispen. 858. Griffith, Med. Bot. 254.

The leaves only are officinal in the *U. S. Ph.* and *Brit. Ph.*, but the pods are also employed in Europe in veterinary practice. The leaves have a faint, but unpleasant odor, and a somewhat bitter, very nauseous taste. Senna is an active purgative, usually causing nausea and colic when given alone. It is seldom administered in substance; the dose is from half a drachm to two drachms.

Senna Deprived of Resin.

℞. Senna, one part.
Alcohol, four parts.

Macerate for two days, express, and dry. *Ph. Germ.*

The resinous principle, causing griping, is removed by this treatment without injury to the purgative properties.

Laxative Species.
(St. Germain Tea.)

℞. Senna, deprived of resin, sixteen parts.
Elder flowers, ten parts.
Fennel,
Anise, each, five parts.

Cut and bruise; when dispensing add
Cream of tartar, three parts.

A pleasant laxative. *Ph. Germ.*

Compound Powder of Senna.

℞. Powdered senna,
Cream of tartar, each, two ounces.
Powdered scammony,
half an ounce.
" ginger, two drachms.

Mix. Dose, a scruple to a drachm. *Lond. Ph.* 1788.

Powder of Senna and Guaiacum.

℞. Powdered senna,
" guaiacum, equal parts.

Mix. Dose, two teaspoonfuls twice or thrice a day. In jaundice. *Augustin.*

Extract of Senna.

℞. Senna, one part.
Boiling water, eight parts.

Infuse with the water in two portions, express, let settle, decant, and evaporate. *Dorvault.*

Pills of Senna.

℞. Powdered senna, one drachm.
Extract of dandelion, sufficient.

Mix, and make thirty pills. Dose, five to eight. *Hufeland.*

Confection of Senna.
(Lenitive Electuary.)

℞. Senna, in fine powder, eight troyounces.
Coriander, in fine powder, four troyounces.
Figs, twelve troyounces.
Prunes, sliced, seven troyounces.
Tamarinds, ten troyounces.
Purging cassia, finely bruised, sixteen troyounces.
Sugar, in coarse powder, thirty troyounces.
Water, sufficient.

Digest purging cassia, tamarind, prune, and fig with three pints of water for three hours; separate the coarser portions by the hand, and rub the pulpy mass, first through a coarse sieve and then through a fine one, or through a muslin cloth. Digest the residue with a pint of water, and treat the same as before; mix the pulpy liquids, dissolve the sugar, and evaporate to eighty-four troyounces, and, while yet warm, incorporate with it the senna and coriander. The whole should then weigh ninety-six troyounces. *U. S. Ph.*

A good and agreeable laxative. Dose, about two drachms, at bedtime or early in the morning.

The confection of *Brit. Ph.* is very similar in composition; the formula of *Paris Codex* is very complex.

℞. Senna, in fine powder, ten parts.
Coriander, one part.
Syrup, fifty parts.
Pulp of tamarind, fifteen parts.

Heat the syrup and pulp by means of a steam-bath, and add the mixed powders to form an electuary. *Ph. Germ.*

Compound Confection of Senna.

℞. Confection of senna, two ounces.
Powdered jalap, one drachm.
Cream of tartar, two drachms.
Powdered ginger, one drachm and a half.
Syrup, sufficient.
Mix. Dose, one drachm. *Beasley.*

Electuary of Senna and Rhubarb.

℞. Powdered rhubarb,
" senna, each, two drachms.
" fennel, three drachms.
" liquorice, half an ounce.
Pulp of purging cassia,
" tamarinds, each, two ounces.
Syrup of male fern, sufficient.
Mix. Dose, two drachms to half an ounce. *Van Mons.*

Electuary of Senna and Cream of Tartar.

℞. Powdered senna, three drachms.
Cream of tartar, one drachm.
Manna, three ounces and a half.
Pulp of purging cassia,
" tamarinds, each, one ounce and a half.
Syrup of violets, sufficient.
Mix. Dose, about two drachms. *Van Mons.*

Electuary of Senna and Figs.

℞. Powdered senna, half an ounce.
Pulp of figs, sufficient.
Make an electuary. A piece the size of a hazel nut, night and morning, to obviate costiveness. *Ellis.*

Electuary of Senna and Sulphur.

℞. Powdered senna, Sulphur, Cream of tartar, each, one ounce.
Manna, six ounces.
Pulp of tamarinds, eight ounces.
Syrup of senna, sufficient.
Mix. Said to be useful in hemorrhoids. Dose, two to three drachms. *Swediaur.*

Compound Wine of Senna.

℞. Senna, one ounce.
Rhubarb, six drachms.
Cloves,
Saffron, each, one drachm.
Sherry wine, two pints.
Macerate for five days, often agitating, and decant. As a tonic purgative. Dose, about two fl. ounces. *Pierquin.*

℞. Senna, four ounces.
Coriander,
Fennel, each, two drachms.
Sherry wine, two pints and a half.
Digest for three days; add
Stoned raisins, three ounces.
Macerate for twenty-four hours, express, and strain. *Swed. Ph.*

Tincture of Senna.

℞. Senna, two ounces and a half.
Caraway, bruised,
Coriander, bruised, each, half an ounce.
Stoned raisins, two ounces.
Proof spirit, twenty fl. ounces.
Obtain by maceration and displacement twenty fl. ounces. This is the old *Elixir Salutis.* *Lond. Ph.*
A warm, stomachic purgative, in atonic gout, etc., in doses of two fl. drachms to a fl. ounce.

Tincture of Senna and Jalap.

℞. Senna, three ounces.
Jalap, in powder, one ounce.
Coriander, bruised,
Caraway, bruised, each, half an ounce.
Cardamom, bruised, two drachms.
Sugar, four ounces.
Diluted alcohol, three pints.
Macerate for fourteen days, express, and filter. *U. S. Ph.* 1850.
Similar to the last; used in same cases, and in like doses.

Tincture of Senna and Gentian.

℞. Senna, four ounces.
Gentian, bruised,
Orange-peel, bruised, each, one ounce.
Proof spirit, sixty-four ounces.
Infuse for some days, often stirring, express, and filter. *Swediaur.*

Infusion of Senna.

℞ Senna, one troyounce.
Coriander, bruised, one drachm.
Boiling water, one pint.

Macerate for an hour, in a covered vessel, and strain. *U. S. Ph.*

Dose, about four fl. ounces.

℞ Senna, one ounce.
Ginger, sliced, thirty grains.
Boiling water, ten ounces.

Infuse in a covered vessel for one hour, and strain. Dose, one to two fl. ounces. *Brit. Ph.*

Compound Infusion of Senna.

℞ Senna, half an ounce.
Sulphate of magnesium,
Manna, each, one ounce.
Fennel seed, one drachm.
Boiling water, half a pint.

Macerate in a covered vessel till cool, and strain. Dose, one-third, every four or five hours, till it operates. *Wood.*

℞ Senna, cut, two parts.
Boiling water, twelve parts.

Digest for five minutes, express, and add

Rochelle salt, two parts.
Manna, three parts.

Dissolve and strain. The product should weigh fifteen parts. This is the *Vienna draught* much employed in Europe. *Ph. Germ.*

Black Draught.

℞ Senna,
Mint, each, ten drachms.
Boiling water, two pints.

Macerate for an hour, strain, and add

Salphate of magnesium, eight ounces.

Dose, two to four fl. ounces. *Guy's Hosp.*

Infusion of Senna and Tamarinds.

℞ Senna, one drachm.
Tamarinds, one ounce.
Coriander, bruised, one drachm.
Brown sugar, half an ounce.
Boiling water, eight fl. ounces.

Infuse for four hours in a covered vessel, and strain. Dose, two to four fl. ounces. *Ed. Ph.*

Infusion of Senna and Coffee.

℞ Senna, two drachms.
Roasted coffee, one drachm.
Boiling water,
Hot milk, each, three fl. ounces.

Infuse for twelve hours, and strain. To be taken at once, in the morning. *Foy.*

℞ Senna, ten grains.
Hot infusion of coffee,
" milk, each, at will.

Mix, and when cool, strain, and add

Sugar, sufficient.

An agreeable purge for children. The amount of senna to be increased according to the age. *Guersant and Blake.*

℞ Senna,
Sulphate of magnesium,
Coffee, roasted and ground, each, half an ounce.
Boiling water, four fl. ounces.

Digest for half an hour, strain, and add

Sugar, one and a half ounces.

As efficient as the "*black draught*," but much more agreeable. *Combes.*

℞ Coffee, roasted and ground,
Senna, each, one ounce.
Boiling water, half a pint.

Make an infusion, and evaporate to one ounce, and add

Simple syrup, three fl. ounces.

Mix. *Combes.*

Infusion of Senna and Buckthorn.

℞ Senna, two drachms.
Sulphate of sodium, half an ounce.
Boiling water, four fl. ounces.
Syrup of buckthorn, one fl. ounce.

Infuse, cool, and strain. *Ellis.*

Infusion with Tincture of Senna.

℞ Infusion of senna, six fl. drachms.
Tincture of senna, two fl. drachms.
Manna, two drachms.
Spearmint water,
Distilled water, each, one fl. ounce and a half.

Mix. One-half at a dose; to be repeated, if it does not operate. *Abernethy.*

Anthelmintic Emulsion.

℞ Infusion of senna, ten fl. drachms.
Syrup of buckthorn, one fl. drachm.

Confection of scammony, two scruples.
Copaiba, thirty minims.
Spirit of turpentine, six fl. drachms.

Mix, and make an emulsion. Very efficient as an anthelmintic; to be taken early in the morning. *Med.-Chirurg. Rev.*

Compound Senna Mixture.

℞. Sulphate of magnesium, four ounces.
Extract of liquorice, half an ounce.
Tincture of senna, two and a half ounces.
Comp. tincture of cardamom, ten fl. drachms.
Infusion of senna, sufficient.

Dissolve the sulphate, and extract in fourteen fl. ounces of the infusion, add the tinctures and sufficient infusion to make twenty fl. ounces.

Dose, two to three tablespoonfuls. *Brit. Ph.*

℞. Infusion of senna, one fl. ounce.
Tincture of jalap, one fl. drachm.
Sulphate of magnesium, four drachms.
Syrup of ginger, one fl. drachm.

Mix. As a purgative draught. *Ainslie.*

Infusion of Senna and Rhubarb.

℞. Senna, six drachms.
Manna, one ounce.
Bruised rhubarb,
" cardamom, each, two drachms.
Boiling water, one pint.

Infuse for one hour, and strain. Half a teacupful every hour, till it operates. *Ellis.*

Infusion of Senna and Lemon Juice.

℞. Senna, one ounce and a half.
Fresh lemon-peel, one ounce.
Lemon juice, one fl. ounce.
Boiling water, sixteen fl. ounces.

Infuse for two hours, and strain. *Lond. Ph.* 1746.

Syrup of Senna.

℞. Senna, broken small, sixteen ounces.
Oil of coriander, three minims.
Sugar, twenty-four ounces.
Water, one hundred ounces.
Alcohol, two fl. ounces.

Digest senna at 120° first with seventy ounces of water for twenty-four hours, afterwards with the remaining water for six hours. Evaporate the expressed and mixed liquids in a water-bath to ten fl. ounces, and when cold, add the oil dissolved in the alcohol; filter, wash the filter with water to obtain sixteen fl. ounces, and dissolve in this the sugar. The product should weigh forty-two ounces, and have the sp. gr. 1.310. Dose, one to four fl. drachms. *Brit. Ph.*

A fluidounce represents half an ounce of senna.

Syrup of Senna and Manna.

℞. Senna, cut, ten parts.
Fennel, bruised, one part.
Hot water, fifty parts.

After several hours express, and dissolve

Manna, fifteen parts.

After subsiding, decant, strain, and in fifty-five parts dissolve

Sugar, fifty parts.

Used as a mild laxative for infants, and as an addition to purgative mixtures. *Ph. Germ.*

Compound Aromatic Syrup of Senna.

℞. Alexandria senna, four troyounces.
Jalap, one troyounce and a half.
Rhubarb, four drachms.
Cinnamon,
Cloves, each, one drachm.
Nutmeg, thirty grains.
Oil of lemon, twenty minims.
Sugar, twenty-four troyounces.

Exhaust the first six articles, in powder, No. 50, by diluted alcohol, evaporate by means of a water-bath to eighteen fluidounces, filter, dissolve the sugar, and add the oil. Dose, two to four fl. drachms. *Grahame.*

Fluid Extract of Senna.

℞. Senna, in powder, No. 60, sixteen troyounces.
Glycerin,
Water, each, four fl. ounces.
Alcohol, eight fl. ounces.

Macerate the powder, properly packed in a percolator, with the mixed liquids for four days; then, with diluted alcohol, displace twenty-six fl. ounces, reserving the first ten,

add to the remainder four fl. ounces of glycerin, evaporate to six fl. ounces, and mix with the reserved portion. *U. S. Ph.*

Dose, half a fl. ounce.

Syrup of Senna and Rhubarb.

℞ Syrup of senna, four fl. ounces.
" rhubarb, two fl. ounces.
" cinnamon, one fl. ounce.

Mix. *Van Mons.*

Syrup of Senna and Cider.

℞ Cider, four pounds.
Senna, four ounces and a half.

Digest for a night, express, and strain, then add

Sugar, three pounds.

Clarify, and form a syrup. *Sard. Ph.*

Injection of Senna.

℞ Senna,
Sulphate of sodium,
each, four drachms.
Boiling water, sixteen ounces.

Infuse senna in the water, strain, and dissolve the sulphate. *Paris Codex.*

SERPENTARIA.

Virginia Snakeroot.

Virginia snakeroot is furnished by several species of *Aristolochia*, as the *A. serpentaria*, *A. hirsuta*, and *A. reticulata*, all natives of the United States, especially the western portions.

Sex. Syst. Gynand. hexand. *Nat. Syst.* Aristolochiaceæ.

Willd. Sp. Pl. iv. 159. Griffith, Med. Bot. 529.

The root, which is the officinal portion, is very similar in all the above-mentioned species. It is in tufts of slender, long, matted fibres, attached to a knotty, rugged head. These fibres are brittle, of a yellowish or brownish color, with an aromatic odor, and a pungent, bitter, camphorated taste. It is a stimulating tonic, and may also act as a diaphoretic and diuretic. The dose of the powder is from ten to thirty grains.

Compound Pills of Virginia Snakeroot.

℞ Powdered Virginia
snakeroot, twenty-four grains.
Camphor, forty-eight grains.
Conserve of roses, sufficient.

Mix, and make eighteen pills; to be taken during the apyrexia, in malignant intermittents. *Foy.*

Electuary of Virginia Snakeroot.

℞ Powdered Virginia snakeroot,
" contrayerva,
each, one drachm.
Aromatic confection, one drachm.
Preserved ginger, six drachms.
Syrup of parsley, sufficient.

Make electuary. Half a drachm every four hours, as a febrifuge. *Cadet.*

Fluid Extract of Virginia Snakeroot.

℞ Serpentaria, in powder,
No. 60, sixteen troyounces.
Alcohol, one pint.

Macerate the powder, properly packed in a percolator, with the alcohol for four days; then with alcohol displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, ten to thirty minims.

Infusion of Virginia Snakeroot.

℞ Serpentaria, in powder,
No. 40, half a troyounce.
Water, sufficient.

Moisten with two fl. drachms of water, pack firmly in a conical percolator, and with water displace one pint.

It may also be prepared by macerating the serpentaria in a pint of boiling water for two hours, and straining. *U. S. Ph.*

Brit. Ph. macerates half an ounce of serpentaria with twenty fl. ounces of boiling water.

Dose, one to two fl. ounces every two hours, in low forms of fever.

Compound Infusion of Virginia Snakeroot.

℞ Virginia snakeroot,
Contrayerva, each, five drachms.
Boiling water, one pint.

Macerate for two hours, strain, and add

Tincture of Virginia
snakeroot, two fl. ounces.

Mix. Dose, a tablespoonful. *Beasley.*

Tincture of Virginia Snakeroot.

℞ Serpentaria, in powder,
No. 50, four troyounces.
Diluted alcohol, sufficient.

Obtain by displacement two pints. *U. S. Ph.*

The tincture of *Brit. Ph.* is of nearly the same strength.

Mixture of Virginia Snakeroot and Allspice.

℞ Comp. infus. of Virginia snakeroot, twelve fl. ounces.
Tincture of allspice, four fl. ounces.

Mix. Four spoonfuls every six hours, in retrocedent and atonic exanthemata. *Saunders.*

Acetated Mixture of Virginia Snakeroot and Allspice.

℞ Add vinegar, two fl. ounces, to sixteen fl. ounces of last-mentioned mixture.

Dose, as above, in petechial typhus. *Swediaur.*

Infusion of Virginia Snakeroot and Ether.

℞ Virginia snakeroot, six drachms.
Boiling water, eight fl. ounces.

Infuse, and strain; when cold, add

Sulphuric ether, two fl. drachms.

A tablespoonful, every hour. *Richter.*

Wine of Virginia Snakeroot and Vanilla.

℞ Virginia snakeroot, six drachms.
Vanilla, two drachms.
Sherry wine, one pint.

Macerate for four hours, and add to the strained liquid

Camphor, half a drachm.
Acetic ether, one fl. drachm.
Syrup of cinnamon, half a fl. ounce.

Dose, two spoonfuls an hour, in low states of the system. *Vogt.*

Tincture of Virginia Snakeroot and Balsam of Peru.

℞ Virginia snakeroot, six drachms.
Proof spirit, five fl. ounces.
Water, sufficient

to obtain six fl. ounces of strained fluid; after one hour of infusion, add

Camphor, half a drachm.
Balsam of Peru, one drachm.
Gum Arabic, two drachms.

Make an emulsion, and add

Acetic ether, one fl. drachm.

A spoonful every hour, in cases requiring stimulation. *Phœbus.*

SESAMUM.

Benne.

Two species of Sesamum, the *S. orientale*, and the *S. Indicum*, afford leaves and seeds that are recognized as officinal. They are both natives of Asia, and are cultivated in the West Indies and in the southern parts of the United States.

Sex. Syst. Didyn. angios. *Nat. Syst.* Pedaliaceæ.

Linn. Sp. Pl. 883, 884. Griffith, Med. Bot. 515.

The seeds are small, inodorous, and afford a bland oil, which may be used for all the purposes of olive oil. The leaves abound in a gummy substance which forms, with water, a rich, bland mucilage, useful in all cases requiring the use of demulcents.

Infusion of Benne.

℞ Fresh leaves of benne, a handful.
Cool water, a pint.

Infuse till a mucilage is formed. When dried leaves are used, the water should be hot. *Wood.*

Oil of Benne.

This is obtained from the seeds by expression. It is inodorous, of a sweet, bland taste, and keeps well without becoming rancid. It is used as an application to promote softness of the skin. *Redwood.*

It has likewise been recommended as a substitute for the more costly olive oil in many pharmaceutical preparations.

SIMARUBA.

Simaruba.

This is the bark of the root of *Simaruba officinalis*, a large tree, native of Jamaica, and several parts of South America.

Sex. Syst. Decand. monog. *Nat. Syst.* Simarubaceæ.

De Cand, Prod. i. 733. Griffith, Med. Bot. 198.

The bark is in long pieces, much rolled or quilled. It is fibrous, tough; of a grayish color externally, and yellowish within. It is inodorous, but extremely bitter. It has the properties of the pure bitters, but is apt to act on the stomach and bowels.

Infusion of Simaruba.

℞ Simaruba bark, bruised, three drachms.
Boiling water, one pint.

Macerate for two hours, and strain. *Ed. Ph.*

Dose, two fl. ounces.

Compound Infusion of Simaruba.

℞ Simaruba,
Wormwood, each, two drachms.
Boiling water, one pint.

Infuse for fifteen minutes; strain, and add

Syrup of gentian, one fl. ounce.

To be taken in wineglassful doses. *Foy.*

SINAPIS.

MUSTARD.

The seeds of two species of sinapis are used in medicine, those of *S. nigra* and *S. alba*, both annual plants, indigenous to many parts of Europe, and cultivated in our gardens.

Sex. Syst. Tetradyn. siliq. *Nat. Syst.* Brassicaceæ.

Linn. Sp. Pl. 933. Griffith, Med. Bot. 133.

Black mustard seeds are small, globular, of a deep brown color, having a peculiar smell when bruised, which becomes pungent on the flour being mixed with water; their taste is bitterish and pungent. White mustard seeds are larger, of a yellowish color, and less pungent. These seeds act as a laxative; when in the state of flour, they operate as an emetic, and when applied to the skin as a rubefacient, or even vesicant.

Cataplasm of Mustard.

℞ Boiling water, ten fl. ounces.
Cake meal,
Flour of mustard,
each, two ounces and a half.

Mix the powders, and gradually add the water, stirring till a cataplasm is formed. *Brit. Ph.*

℞ Flour of mustard, two ounces.
Crumb of bread, four ounces.
Common salt, half an ounce.
Vinegar, sufficient.

Mix. *Ammon.*

Used as rubefacients and revulsives.

Compound Cataplasm of Mustard.

℞ Flour of mustard, eight ounces.
Powdered white pepper,
" ginger,
each, one drachm.
Oxymel, sufficient.

Mix. *Foy.*

℞ Flour of mustard, four ounces.
Yeast, one ounce and a half.
Chloride of ammonium,
one drachm.
Rue, half an ounce.
Vinegar, sufficient.

Mix. *Span. Ph.*

Used as above.

℞ Flour of mustard, four ounces.
Hot water, sufficient.

Mix. As a rubefacient. *Ellis.*

Mustard Paper.

℞ Black mustard, in powder,
ninety grains.
Solution of gutta-percha,
sufficient.

Add together to obtain a mixture of semi-liquid consistence, and spread on one side of rather stiff paper, four inches square; then dry. Before applying to the skin dip for about fifteen seconds in warm water. *U. S. Ph.*

Mustard Gargle.

℞ Mustard, four drachms.
White wine, six ounces.
Angelica spirit, one ounce.

Digest, and strain. *Thilenius.*

℞ Flour of mustard, one drachm.
Water of angelica,
" hyssop,
each, six fl. ounces.
Spirit of horseradish,
half a fl. ounce.
Chloride of ammonium,
four fl. scruples.
Honey of roses, four fl. ounces.

Mix. *Spielmann.*

Mustard Foot Bath.

℞ Flour of mustard, four ounces.
Hot water, one gallon.

Mix. *Béral.*

Injection of Mustard.

℞ Flour of mustard, two drachms.
Boiling water, sixteen ounces.

Infuse. In uterine discharges arising from ulcerated carcinoma. *Ashwell.*

Mustard Whey.

℞ Milk, one pint.
Water, two pounds.
Bruised mustard-seed,
one ounce and a half.

Boil till curdled, and strain. *Beasley.*

℞ Milk, one pint.
Bruised mustard seed, one ounce.

Boil till curdled, and strain, then add

Sherry wine, six fl. ounces.

A draught every hour or two, in low states of the system. *Ellis.*

Mustard Ointment.

℞. Flour of mustard, three ounces.
Oil of almonds, half a fl. ounce.
Lemon juice, sufficient.

Mix. In sun-burn, etc. *Frank.*

Compound Mustard Ointment.

℞. Resin ointment, one ounce.
Soap, half an ounce.
Camphor, two scruples.
Flour of mustard, one scruple.

Mix. *Ferriar.*

Lotion of Mustard.

℞. Flour of mustard, one ounce.

Express the oil, and add to the mass

Oil of turpentine, eight ounces.

Macerate for three days, express, and strain. As a friction in paralysis. *Niemann.*

Fixed Oil of Mustard.

A fixed oil is obtained in the preparation of flour of mustard, by subjecting the bruised seed to powerful expression in an hydraulic press. This oil is used as a substitute for sweet oil, for dressing salad, etc.

Volatile Oil of Black Mustard.

℞. Bruised black mustard seed, twenty pounds.
Cold water, sufficient to cover.

Macerate, distil, and separate the oil. *Magendie.*

A very active rubefacient.

Tincture of Oil of Mustard.

℞. Volatile oil of mustard, one part.
Alcohol, fifty parts.

Dissolve. A good rubefacient. *Ph. Germ.*

Compound Liniment of Mustard.

℞. Volatile oil of mustard, one fl. drachm.
Ethereal extract of mezereon, forty grains.
Camphor, one hundred and twenty grains.
Castor oil, five fl. drachms.
Alcohol, four fl. ounces.

Dissolve. As a rubefacient. *Brit. Ph.*

℞. Lard,
Oil of almonds, each, twelve ounces.
Yellow wax, four ounces.

Melt by a gentle heat, pour into a heated mortar, and when cooling, add

Oil of lavender, three ounces.
Carbonate of ammonium, half an ounce.
Tincture of mustard, two fl. ounces.
Camphor, one ounce.

Triturate the ammonia with the oil of lavender; dissolve the camphor in the tincture, and add both to the melted mass, incorporating well. As an application to chilblains. *Béral.*

SODIUM.

Sodium.

SODA.

Caustic Soda.

℞. Solution of soda, at will.

Evaporate in an iron vessel, till it will solidify, on cooling; pour upon a flat stone or iron plate. *U. S. Ph.* and *Brit. Ph.*

Solution of Soda.

℞. Carbonate of sodium, twenty-six troyounces.
Lime, eight troyounces.

Dissolve the carbonate in three and a half pints of distilled water, heat to boiling, and mix with it the hot mixture of the lime, and three pints of distilled water; boil for ten minutes, transfer to a muslin strainer, and wash the sediment upon it with enough distilled water to make the strained liquid measure six pints; keep it in bottles of green glass. It has the sp. gr. 1.071, and contains five and seven-tenths per cent. of hydrate of sodium. *U. S. Ph.*

Brit. Ph. employs twenty-eight ounces of carbonate of sodium and twelve ounces of lime, and obtains a solution of the sp. gr. 1.047.

Ph. Germ. orders a solution having the sp. gr. 1.332, and containing thirty per cent. of hydrate of sodium.

Caustic soda is used as a caustic and escharotic, like caustic potassa. The solution is antacid and sedative to the stomach, and appears to influence the secretion of the liver. Dose of the solution of *U. S. Ph.* and *Brit. Ph.* ten to thirty minims, largely diluted.

SODA CHLORINATA.

CHLORINATED SODA.

℞. Dried carbonate of sodium, nineteen parts.
Water, one part.

Mix and place in a suitable vessel, and pass in chlorine gas to saturation. *Christison.*

This article is more generally used in the liquid state, prepared in the following manner.

Solution of Chlorinated Soda.

℞. Chlorinated lime, twelve troyounces.
Carbonate of sodium, twenty-four troyounces.
Water, twelve pints.

Dissolve the carbonate of sodium in three pints of the water, with the aid of heat. Triturate the remainder of the water with the chlorinated lime, in small portions at a time. Set aside for some hours, to settle; decant clear solution, and add that of the carbonate of sodium, decant, and strain through linen, and keep in bottles, protected from the light. *U. S. Ph.*

Solution of chlorinated soda, *Paris Codex*, is less than one-third this strength; *Ph. Germ.* directs four chlorinated lime, five carbonate of sodium, and thirty parts of water.

℞. Carbonate of sodium, twelve ounces.
Distilled water, thirty-six ounces.

Dissolve, and pass into the solution the washed chlorine gas evolved from fifteen fl. ounces of muriatic acid and four ounces of black oxide of manganese; then keep the liquid in stoppered bottles in a cool and dark place. *Brit. Ph.*

This is known as *Labarraque's Disinfecting Solution;* it is chiefly employed as a disinfectant, but is also used internally, in doses of thirty drops to one fl. drachm, in low fevers, etc.

Diluted Solution of Chlorinated Soda.

℞. Solution of chlorinated soda, half a fl. drachm.
Distilled water, four fl. ounces.

To be taken in spoonful doses, in the apyrexia of intermittents. *Gouzee.*

℞. Solution of chlorinated soda, one part.
Water, twelve to sixteen parts.

As a lotion to foul and cancerous ulcers. *Foy.*

Gargle of Chlorinated Soda.

℞. Solution of chlorinated soda, one fl. drachm.
Hydromel, one fl. ounce.
Distilled water, seven fl. ounces.

Mix. *Béral.*

Mouth Wash of Chlorinated Soda.

℞. Solution of chlorinated soda,
Tincture of myrrh, each, half a fl. ounce.
Rose water, one fl. ounce.
Water, six fl. ounces.

Mix. In aphthous ulceration of the mouth. *Waring.*

Injection of Chlorinated Soda.

℞. Solution of chlorinated soda, one fl. ounce.
Water, sixteen fl. ounces.

Mix. Used as a vaginal injection in fetid discharges from malignant diseases. *Pereira.*

Cataplasm of Chlorinated Soda.

℞. Boiling water, eight fl. ounces.
Cake meal, four ounces.
Solution of chlorinated soda, two fl. ounces.

Add the meal gradually to the water, constantly stirring; then mix in the chlorinated soda.

Applied to foul and sloughing ulcers. *Brit. Ph.*

SODII ACETAS.

ACETATE OF SODIUM.

It is chiefly prepared by the manufacturer of crude pyroligneous acid, in the process of obtaining the officinal acetic acid.

Diuretic or cathartic, according to dose, which varies from one scruple to four drachms.

Compound Pills of Acetate of Sodium.

℞. Acetate of sodium, five drachms.
Camphor,
Nitrate of potassium, each, two drachms
Conserve of elder berries, sufficient.

Mix, and make one hundred and twenty pills. Dose, two, morning and evening, to check the secretion of milk. *Bories.*

℞. Acetate of sodium, Powdered rhubarb, Inspissated ox gall, each, one drachm.
Powdered gum Arabic, half a drachm.

Mix, and make pills of two grains. Dose, ten to fifteen, twice a day, as a laxative.
Augustin.

SODII ARSENIAS.

Arseniate of Sodium.

℞. White arsenic, two troyounces.
Nitrate of sodium, eight hundred and sixteen grains.
Dried carbonate of sodium, five hundred and twenty-eight grains.

Pulverize, mix, and introduce into a clay crucible, expose to a full red heat until effervescence ceases and complete fusion has taken place. Pour the salt on a porcelain slab, and while still warm, put into half a pint of boiling distilled water, dissolve, filter, and crystallize.
Brit. Ph. and *U. S. Ph.*

In intermittents, and some diseases of the skin. Dose, one-sixteenth to one-eighth of a grain.

Solution of Arseniate of Sodium.

℞. Arseniate of sodium, rendered anhydrous by a heat not exceeding 300°, four grains.
Distilled water, one fl. ounce.

Dissolve. Dose, five to ten minims.
U. S. Ph. and *Brit. Ph.*

Heinecke's Solution.

℞. Arseniate of sodium, six grains.
Peppermint water, two fl. ounces and a half.

Add to the solution
Wine of cinnamon, half a fl. ounce.
Laudanum, one fl. drachm.

Dose, forty to fifty drops, four times a day.
Heinecke.

Pearson's Solution.

℞. Crystallized arseniate of sodium, one grain.
Distilled water, one fl. ounce.

Dissolve. Dose, twenty drops. *Pearson.*

℞. Arseniate of sodium, one grain.
Distilled water, six hundred grains.

Dissolve. *Paris Codex.*

SODII BICARBONAS.

Bicarbonate of Sodium.

Carbonate of sodium, crystallized, two pounds.
Carbonate of sodium, dried, three pounds.

Triturate together, and saturate in a suitable bottle with carbonic acid gas; then shake the salt with half its weight of cold distilled water, drain, and dry by exposure to the air. *Brit. Ph.*

℞. Commercial bicarbonate of sodium, in powder, sixty-four troyounces.

Put in a conical glass percolator, cover with wet muslin, and percolate six pints, or sufficient water through it until the percolate ceases to precipitate a solution of sulphate of magnesium; dry it. *U. S. Ph.*

Antacid. Dose, ten to sixty grains.

Emulsion with Bibarbonate of Sodium.

℞. Bicarbonate of sodium, sixteen grains.
Nitre, four grains.
Syrup of marsh mallow,
" violets, each, one fl. ounce.
Lettuce water, two fl. ounces.
Emulsion of almonds, twelve fl. ounces.

Mix. In nephritic complaints. *Béral.*

Effervescent Citro-Tartrate of Sodium.

℞. Bicarbonate of sodium, in powder, seventeen ounces.
Tartaric acid, in powder, eight ounces.
Citric acid, in powder, six ounces.

Mix thoroughly, heat the mixture to between 200° and 220°, and when the particles begin to aggregate, stir assiduously to obtain granules; by suitable sieves separate the granules of uniform and convenient size. Dose, one to two drachms.
Brit. Ph.

Effervescing Soda Powders.

℞. Bicarbonate of sodium, twenty-six grains.
Powdered ginger, five grains.
White sugar, two drachms.
Essence of lemon, one drop.
Mix, and put in a white paper.

℞. Tartaric acid, half a drachm.
Put in a blue paper. When used, dissolve the contents of each paper in four fl. ounces of water, mix the solutions, and drink in a state of effervescence.
Known as the *Ginger beer powders.* *Pereira.*

Powder of Bicarbonate of Sodium and Magnesia.

℞. Magnesia, half an ounce.
Bicarbonate of sodium,
Powdered ginger, each, one scruple.
Mix. A small teaspoonful occasionally. *Ellis.*

Lotion of Bicarbonate of Sodium.

℞. Bicarbonate of sodium, two or three drachms.
Water, one pint.
Dissolve. Recommended in eczema and impetigo of the scalp. *Devergie.*

Lozenges of Bicarbonate of Sodium.

℞. Bicarbonate of sodium, three troyounces.
Powdered sugar, nine troyounces.
" nutmeg, sixty grains.
Mucilage of tragacanth, sufficient.
Beat together, and form four hundred and eighty lozenges. *U. S. Ph.*
Antacid and antilithic. They contain three grains; those of *Brit. Ph.* each five grains of bicarbonate.

℞. Bicarbonate of sodium, two ounces.
Sugar, thirty-four ounces.
Oil of peppermint, eighteen drops.
Mucilage, thirty-six drachms.
Mix, and make lozenges of eighteen grains. *Magendie.*

℞. Bicarbonate of sodium, four parts.
Sugar, sixty parts.
Chocolate, eight parts.
Mucilage, nine parts.
Make lozenges of eighteen grains. *Béral.*

Anti-Emetic Mixture.

℞. Bicarbonate of sodium, one drachm and a half.
Powdered gum Arabic, two drachms.
Oil of spearmint, four drops.
White sugar, two drachms.
Carbonic acid water, four fl. ounces.
Mix. A tablespoonful occasionally, to calm the stomach, or prevent vomiting. *Dewees.*

Effervescent Soda Solution.

℞. Bicarbonate of sodium, thirty grains.
Water, twenty ounces.
Dissolve, and pass carbonic acid gas into the solution to obtain a pressure of seven atmospheres. *Brit. Ph.*

Artificial Seidlitz Water.

℞. Sulphate of magnesium, one ounce.
Bicarbonate of sodium,
Tartaric acid, in crystals, each, one drachm.
Water, twenty-one fl. ounces.
Dissolve the salts separately, filter the solutions, mix in a suitable bottle, add the acid, and cork well. *Paris Codex.*

Artificial Selters (Seltzer) Water.

℞. Chloride of calcium, four grains.
" magnesium, twelve grains.
" sodium, four grains.
Carbonate of sodium, sixteen grs.
Phosphate of sodium, one grain.
Sulphate of iron, one-sixth grain.
" sodium, six grains.
Carbonic acid water, twenty fl. ounces.
Dissolve. *Soubeiran.*

Artificial Vichy Water.

℞. Carbonate of sodium, one hundred and six grains.
Chloride of sodium, three grains.
" calcium,
Sulphate of sodium, each, eight grains.
" magnesium, two and a half grains.
" iron, one-tenth grain.
Water, twenty fl. ounces.

Dissolve and impregnate with four volumes of carbonic acid. *Dorvault.*

Soda Mint.

℞. Bicarbonate of sodium, four drachms.
Aromatic spirit of ammonia, one drachm.
Peppermint water, one pint.

Dissolve, and mix. Dose, a tablespoonful for adults, thirty to sixty minims for infants, as an antacid and carminative for over-fed infants and dyspeptics. *G. Norris.*

Mixture of Bicarbonate of Sodium and Copaiba.

℞. Bicarbonate of sodium, one drachm.
Almond emulsion, four fl. ounces.
Copaiba, two fl. drachms.
Laudanum, sixty drops.

Mix. A tablespoonful occasionally, in acute pain in the bladder. *Ellis.*

SODII BISULPHAS.

BISULPHATE OF SODIUM.

℞. Dried sulphate of sodium, ten parts.
Sulphuric acid, seven parts.

Heat in a crucible.

Purgative in doses of two to six drachms. *Beasley.*

Bisulphate of Sodium and Magnesium.

℞. Bisulphate of sodium, at will.
Hot water, sufficient.

Dissolve, add magnesia to saturation; filter, and crystallize.

Laxative and diuretic, in doses from half a drachm to two drachms, several times a day. *Van Mons.*

Effervescent Solution of Bisulphate of Sodium.

℞. Bisulphate of sodium, eight drachms.
Bicarbonate of sodium, five drachms.
Water, one quart.

Dissolve in a suitable bottle. A pleasant aperient, in doses of a wineglassful. *Dorvault.*

SODII BORAS.

BORAX.

Borax is found native in several parts of Europe, and in Peru, and on the shores of certain lakes in Persia and Thibet.

It is a mild diuretic. The dose is about thirty grains.

Compound Powder of Borax.

℞. Powdered borax, one drachm.
" saffron, ten grains.
Oil of cinnamon, two drops.

Mix, for two doses. As an emmenagogue. *Wedel.*

℞. Cream of tartar, one ounce.
Nitrate of potassium,
Borax, each, two drachms.
Powdered digitalis, twenty grains.

Mix and make twelve powders. One, twice or thrice daily, in dropsy. *Copland.*

Lozenges of Borax.

℞. Powdered borax, two drachms.
" sugar, half an ounce.
Mucilage, sufficient.

Mix, and make thirty lozenges. One, occasionally, in aphthous sore mouth. *Phœbus.*

Pills of Borax and Aloes.

℞. Borax, thirty grains.
Aloes,
Capsicum, each, twenty grains.
Oil of lavender, sufficient.

Make eighteen pills. Dose, two, thrice daily, in amenorrhœa. *Copland.*

Collutory of Borax.

℞. Borax, two drachms.
Water,
Tincture of myrrh, each, one fl. ounce.
Honey of roses, two ounces.

Mix. *Swediaur.*

℞. Borax, three drachms.
Mucilage of quince seeds, eight fl. ounces.
Honey of roses, two ounces.

Mix. *Bahi.*

℞. Borax, three drachms.
Infusion of roses, one fl. ounce.
Honey of roses, two ounces.

Mix. *Pringle.*

Collyrium of Borax.

℞. Borax, one drachm.
Laudanum, half fl. drachm.
Rose water, four fl. ounces.
Mix. *Fricke.*

℞. Borax, half a drachm.
Sugar, one drachm.
Rose water, two fl. ounces.
Mix. *Richard.*

Gargle of Borax.

℞. Borax, two drachms.
Oxymel, half fl. ounce.
Water, eleven fl. ounces.
Mix. *Beasley.*

℞. Borax, one drachm.
Tincture of myrrh, half fl. ounce.
Clarified honey, one fl. ounce.
Rose water, four fl. ounces.
Mix. *Ellis.*
In aphthous sore mouth, ptyalism, etc.

Lotion of Borax.

℞. Borax, half a drachm.
Orange-flower water,
Rose water, each, half fl. ounce.
Dissolve. In pruritus. *Cadet.*

℞. Borax, half an ounce.
Sulphate of morphia, six grains.
Rose water, eight fl. ounces.
Mix. Used as a lotion in pruritus vulvæ. *C. D. Meigs.*

Glycerite of Borax.

℞. Borax, in powder, one troyounce.
Glycerin, four fl. ounces.
Rub together until dissolved.
U. S. Ph. and *Brit. Ph.*

Cosmetic Wash of Borax.

℞. Benzoin, one drachm.
Bitter almonds, six drachms.
Borax, two drachms.
Rose water, eight ounces.
Make emulsion and dissolve the borax.
Schubarth.

Honey of Borax.

℞. Powdered borax, one drachm.
Clarified honey, one troyounce.
Mix. *U. S. Ph.*
In aphtha.

Vinegar of Borax.

℞. Distilled vinegar, two fl. ounces.
Borax, one drachm.
Dissolve. As lotion to ringworm of the scalp. *Christison.*

Mixture of Borax.

℞. Borax, two drachms.
Chamomile water, four fl. ounces.
Syrup of orange-peel, half fl. ounce.
Liquid succinate of ammonium, two fl. drachms.
Wine of opium, half a fl. drachm.
Mix. As an emmenagogue, and to facilitate parturition. Dose, two spoonfuls every half hour. *Swediaur.*

℞. Powdered ergot, twenty grains.
Borax, ten grains.
Cinnamon water, one ounce.
Mix. One dose. *Rigby.*

Liniment of Borax.

℞. Borax, one drachm.
Balsam of Peru, ninety grains.
Oil of almonds, one ounce.
Yolk of egg,
White of egg, each, two drachms.
Mix thoroughly. Applied to sore nipples. *Harless.*

Ointment of Borax.

℞. Powdered borax, fifteen grains.
Fresh butter, two drachms.
Rub together. Applied to scaly eruptions. *Radius.*

℞. Powdered borax, one drachm.
Lard, one ounce.
Rub together. An excellent application to painful hemorrhoidal tumors, and to cracked nipples. *Pereira.*

℞. Powdered borax, two drachms.
Rose ointment, one ounce.
Mix. For children. *Cadet.*

SODII BROMIDUM.

BROMIDE OF SODIUM.

℞. Solution of bromide of iron, at will.
" carbonate of sodium, sufficient
to precipitate; filter, and evaporate.
Magendie.

Ointment of Bromide of Sodium.

℞. Bromide of sodium, thirty-four grains.
Lard, one ounce.

Mix. As an application to obstinate cutaneous eruptions. *Magendie.*

SODII CARBOLAS.

Carbolate of Sodium.

Solution of Carbolate of Sodium.

℞. Pure carbolic acid, five parts.
Liquid caustic soda, one part.
Distilled water, four parts.

Dissolve. *Ph. Germ.*

Used like pure carbolic acid, of which this solution contains half its weight. Made with impure carbolic acid, it may be used externally.

SODII CARBONAS.

Carbonate of Sodium.

Dried Carbonate of Sodium.

℞. Carbonate of sodium, at will.

Heat in a clean iron vessel, till perfectly dried, stirring constantly; rub into powder. *U. S. Ph.*

Dose, three to ten grains.

Solution of Carbonate of Sodium.

℞. Carbonate of sodium, one ounce and a half.
Distilled water, (imp.) one pint.

Dissolve. The sp. gr. is 1.026. *Dub. Ph.*

Dose, half a fl. ounce to one ounce diluted, two or three times a day, as antacid, etc.

Diuretic Solution with Carbonate of Sodium.

℞. Carbonate of sodium, three drachms.
Nitre, one drachm and a half.
Honey, one ounce and a half.
Decoction of couchgrass, three pints.

Mix. A glassful every hour, in dropsy. *Cadet.*

Mixture of Carbonate of Sodium and Ipecacuanha.

℞. Carbonate of sodium, twelve grains.
Wine of ipecacuanha, twenty drops.
Laudanum, four drops.
Distilled water, one fl. ounce.

Mix. A teaspoonful every two or three hours, in hooping-cough of children. *Ellis.*

Mixture of Carbonate of Sodium and Chamomile.

℞. Carbonate of sodium, one drachm.
Chamomile water, three fl. ounces.
Syrup of gentian, one fl. ounce.
Tincture of Peruvian bark, one fl. drachm.

Mix. A spoonful occasionally, in scrofula. *Foy.*

Mixture of Carbonate of Sodium and Quassia.

℞. Carbonate of sodium, two drachms and a half.
Rasped quassia, one drachm and a half.
Boiling water, one pint.

Infuse for one hour, and strain. Two to four spoonfuls a day, in dyspepsia. *Augustin.*

Mixture of Carbonate of Sodium and Gentian.

℞. Carbonate of sodium, four scruples.
Compound infusion of gentian, three fl. ounces.
Cinnamon water, three fl. ounces.
Tincture of cardamom, half a fl. ounce.

Mix. A tablespoonful every two or three hours, in acidity and flatulence. *Ellis.*

Pills of Soda and Rhubarb.

℞. Powdered rhubarb, Dried carbonate of sodium, Extract of gentian, each, one scruple.
Calomel, three grains.

Mix, and make twenty pills. Two, occasionally, in dyspepsia. *Ellis.*

Pills of Soda and Ipecacuanha.

℞. Carbonate of sodium, one drachm.
Bitter almonds, half a drachm.
Ipecacuanha, three grains.
Extract of madder, twenty-four grains.
Water, sufficient.

Beat into mass, and form sixty pills. Three, morning and evening, in obstinate cutaneous diseases. *Foy.*

Carbonate of Sodium Pills.

℞. Extract of chamomile, one drachm.
Powdered rhubarb, one scruple.
Carbonate of sodium, half a drachm.
Oil of caraway, ten minims.
Syrup of ginger, sufficient.

Mix, and make twenty-four pills. Two to be taken thrice a day, in dyspepsia. *Ainslie.*

Pills of Carbonate of Sodium.

℞. Dried carbonate of sodium, one drachm.
Soap, two scruples.
Water, sufficient.

Beat together, and make thirty pills. Three, thrice a day. In calculous affections. *Ellis.*

Powder of Carbonate of Sodium and Rhubarb.

℞. Dried carbonate of sodium, one ounce.
Rhubarb, four drachms.
Ginger, one scruple.

Mix. In cardialgia, and dyspepsia. *Beasley.*

Dose, ten to twenty grains.

Powder of Carbonate of Sodium and Mercury.

℞. Dried carbonate of sodium, five drachms.
Calomel, one drachm.
Compound chalk powder, ten drachms.

Mix. Dose, eight to sixteen grains. *Guy's Hosp.*

Lotion of Carbonate of Sodium.

℞. Saturated solution of carbonate of sodium, one ounce.
Warm water, two pints.

Mix. As a lotion in pruritus. *Radius.*

Injection of Carbonate of Sodium.

℞. Carbonate of sodium, one drachm.
Soap, two ounces.
Water, twelve fl. ounces.

Advised as an injection, in cases of uric acid calculi. *Bories.*

Ointment of Carbonate of Sodium.

℞. Carbonate of sodium, two drachms.
Wine of opium, one fl. drachm.
Lard, one ounce.

Mix. In cutaneous affections attended with pain. *Soubeiran.*

℞. Carbonate of sodium,
Sulphuret of sodium, each, one drachm.
Lard, one ounce.

Mix. In tinea capitis, having removed the crusts. *Alibert.*

℞. Impure carbonate of sodium, three drachms.
Slaked lime, two drachms.
Lard, two ounces.

Mix. As the last. *Cadet.*

℞. Carbonate of sodium, two drachms.
Slaked lime, one drachm.
Opium, two grains.
Lard, two ounces.

Mix. In prurigo. *Biett.*

SODII CHLORAS.

Chlorate of Sodium.

℞. Tartaric acid, five ounces.
Boiling water, two pints.

Dissolve, and add

Carbonate of sodium, forty-five drachms and a half.

Also, dissolve

Chlorate of potassium, four ounces and fifteen grains.
Boiling water, sixteen fl. ounces.

Mix the solutions whilst boiling, filter, evaporate, and crystallize. *Hamb. Ph.*

Lotion of Chlorate of Sodium.

℞. Chlorate of sodium, two drachms.
Water, four fl. ounces.

In pruritus. *Darling.*

Gargle of Chlorate of Sodium.

℞. Chlorate of sodium,
one to three scruples.
Barley water, three ounces.
Honey of roses, one ounce.
Mix. *Radius.*

Collutory of Chlorate of Sodium.

℞. Chlorate of sodium, in powder,
Honey, equal weights.
Mix well. *Dorvault.*

SODII CHLORIDUM.

SODÆ MURIAS.
(COMMON SALT.)

Powder of Common Salt and Cochineal.

℞. Powdered common salt,
three drachms.
" cochineal, fifteen grs.
Mix, and divide into six powders. Anthelmintic. One, every morning, following the last dose by some purgative. *Rush.*

Compound Saline Powder.

℞. Common salt,
Sulphate of magnesium,
each, four ounces.
" potassium,
three ounces.
Dry the salts separately, and pulverize; rub them well together, and keep in well-closed vessels. *Ed. Ph.*

As a laxative, in doses of two or three drachms, in a half pint of carbonic acid water, early in the morning.

Bath of Common Salt and Gelatine.

℞. Common salt, one pound.
Water, four pints.
Pour the solution in a bath, and add
Flanders glue, two pounds,
olved in
Water, six pints.
Recommended in scrofulous affections. *Foy.*

Fomentation of Common Salt.

℞. Common salt, two ounces.
Water, six fl. ounces.
Vinegar,
Brandy, each, three fl. ounces.
Mix. As a fomentation to bruises. *Vogt.*

Clyster with Common Salt.

℞. Common salt, one ounce.
Barley water, half a pint.
Add to the solution
Olive oil, one fl. ounce.
Mix. *Mid. Hosp.*

℞. Common salt, one to two ounces.
Tepid flaxseed infusion, one pint.
Dissolve, and add
Castor or olive oil,
Molasses, each, two fl. ounces.
One-half to be used at a time; the remainder in half an hour afterwards, if needed. *Ellis.*

Clyster of Common Salt and Arnica.

℞. Common salt, one ounce.
Infusion of arnica,
twelve fl. ounces.
Mix. Said to be useful in apoplexy and paralysis. *Foy.*

Mixture of Common Salt and Lemon Juice.

℞. Lemon juice, at will.
Common salt, sufficient
to saturate; filter. A tablespoonful every hour, in apyrexia of intermittents. *Bories.*

Ointment of Common Salt.

℞. Common salt, one drachm.
Water, sufficient to dissolve.
Lard, one ounce.
Rub together till smooth. The strength to be gradually increased from one drachm of the salt to four. To inflamed eyelids. *Tavignot.*

Compound Ointment of Common Salt.

℞. Common salt, one ounce and a half.
Water, sufficient to dissolve.
Simple cerate, three ounces.
Rose-water ointment, one ounce.
Rub together. In tinea capitis, as a friction, morning and evening. *St. Marie.*

℞. Common salt, two drachms.
Nut oil, one drachm.
Ox gall, one ounce and a half.
Digest together for thirty-six hours, and triturate well. As a friction to scrofulous tumors. *Roncalli.*

SODII CITRAS.

SOLUTION OF CITRATE OF SODIUM.
(POTION OF RIVERUS.)

℞ Citric acid, four parts.
Pure carbonate of sodium, (crystallized), nine parts.
Distilled water, one hundred and ninety parts.

Dissolve the acid in the water, add the carbonate, dissolve by agitation, and then cork the vial. *Ph. Germ.*

Somewhat effervescent. Used in place of neutral mixture.

SODII HYPOSULPHIS.

HYPOSULPHITE OF SODIUM.

℞ Carbonate of sodium, eight ounces.
Distilled water, one pint.

Dissolve, and mix with the solution

Sulphur, one ounce.

Then pass an excess of sulphurous acid gas into the liquid; boil for a few minutes in a matrass; filter, evaporate to one-third, and set aside to crystallize. *Paris Codex.*

Used in diseases of the skin, in doses of ten grains to one drachm.

℞ Dried carbonate of sodium, in powder, one pound.
Sulphur, five ounces.

Mix and heat in a porcelain vessel until the sulphur melts; stirring the mass to bring every portion in contact with the air. Dissolve the compound thus formed in water; filter, boil the solution with sulphur; filter, evaporate, and crystallize. *Walchner.*

Principally used in daguerreotyping.

Collutory of Hyposulphite of Sodium.

℞ Hyposulphite of sodium, Glycerin, each, two drachms.
Water, six drachms.

Dissolve and mix. In diphtheria. *Maynard.*

Fomentation of Hyposulphite of Sodium.

℞ Hyposulphite of sodium, one ounce.
Water, twelve ounces.

Dissolve. In tineæ. *Tilb. Fox.*

Syrup of Hyposulphite of Sodium.

℞ Hyposulphite of sodium, one ounce.
Water, twelve fl. ounces.
Sugar, twenty-three ounces.

Dissolve the salt in the water, add the sugar, and form syrup. Dose, from one to two ounces twice a day. *Mouchon.*

Bath of Hyposulphite of Sodium.

℞ Hyposulphite of sodium, one to four ounces.
Water, one gallon.

Dissolve, and mix with the water of a bath, adding vinegar while the patient is in the bath, to liberate the sulphurous acid and sulphur. *Pereira.*

SODII NITRAS.

NITRATE OR SODIUM.
(CUBIC NITRE.)

This salt is found in immense beds in Peru, whence it is imported for the manufacture of nitric acid, chrome yellow, sulphuric acid, etc.

It crystallizes in rhomboidal prisms; its taste is sharp, cooling, and bitter.

It is used in medicine for similar purposes as nitrate of potassium, and in about the same doses; on account of its mild action it is principally used in febrile conditions of children.

Mixture of Nitrate of Sodium.

℞ Nitrate of sodium, thirty grains.
Decoction of marsh mallow, two ounces.
Sugar, two drachms.

Mix. One or two fl. drachms every hour. *Fricke.*

Fomentation of Nitrate of Sodium.

℞ Nitrate of sodium, one ounce.
Water, two ounces.

Dissolve. In articular rheumatism. *Rademacher.*

SODII IODIDUM.

IODIDE OF SODIUM.

℞ Solution of iodide of iron, recently prepared, at will.
Solution of carbonate of sodium, sufficient

to precipitate: filter and evaporate to crystallization.

Used for the same purposes and in the same manner as iodide of potassium. It is stated by Gamberini to be better borne and less likely to occasion iodism than the potassium salt. Dose, five to twenty grains.

SODII PHOSPHAS.

Phosphate of Sodium.

℞. Powdered burnt bones, ten pounds.
Sulphuric acid, six pounds.
Carbonate of sodium, sufficient.

Mix the powdered bone with the acid in an earthen vessel, add a gallon of water, and stir. Digest for three days, occasionally adding a little water, then pour in a gallon of boiling water, and strain; adding boiling water till the liquid passes almost tasteless. Let settle, decant, and boil down to a gallon. After settling, pour it into an iron vessel, heat, and gradually add the carbonate of sodium dissolved in hot water, as long as there is effervescence; then filter, and let crystallize. More crystals will be obtained by adding carbonate of sodium in excess, and again evaporating to crystallization. Keep in a well-stopped bottle. *U. S. Ph.*

A mild purgative, in doses of four drachms to one ounce.

℞. Acid phosphate of calcium, at will.

Add carbonate of sodium to saturation; let settle, decant, evaporate, and crystallize. *Guibourt.*

Compound Powder of Phosphate of Sodium.

℞. Phosphate of sodium, two drachms.
Carbonate of sodium, one drachm.
Fennel sugar, half an ounce.

Mix. Two to three teaspoonfuls a day, to aid digestion. *Berends.*

Mixture of Phosphate of Sodium.

℞. Phosphate of sodium, half an ounce.
Decoction of carrageen, six fl. ounces.
Syrup of orgeat, half an ounce.

Mix. As a purgative. *Radius.*

℞. Phosphate of sodium,
Syrup of marsh mallow, each, half an ounce.
Water, four fl. ounces.

Mix. As a purgative. *Augustin.*

SODII SULPHAS.

Sulphate of Sodium. (Glauber's Salt.)

Powder of Sulphate of Sodium and Tartar Emetic.

℞. Sulphate of sodium, two ounces.
Tartar emetic,
Opium, each, one grain.
Gum Arabic,
Powdered liquorice, each, one drachm.

Mix. To be taken in water in divided doses during the day, as a purgative and diuretic. *Swediaur.*

Powder of Sulphate of Sodium and Nitre.

℞. Dried sulphate of sodium, eighteen drachms.
Nitre, half a drachm.
Tartar emetic, one grain.

Mix. One-third, as a dose, in water or broth. *Beasley.*

Powder of Sulphate of Sodium and Opium.

℞. Sulphate of sodium, four scruples.
Powdered opium, two grains.

Mix. In hemorrhages and inflammations, after bleeding. *Radius.*

Compound Pills of Sulphate of Sodium.

℞. Sulphate of sodium, half a drachm.
Bitter almonds, one drachm.
Ipecacuanha, two grains.
Extract of madder, sufficient.

Beat into mass, and make sixty pills. Three, morning and evening, in obstinate cutaneous affections. *Foy.*

Electuary with Sulphate of Sodium.

℞. Dried sulphate of sodium, half an ounce.
Pulp of tamarinds, one ounce.
Syrup of lemon juice, sufficient.

Mix. Two spoonfuls every hour, till it operates. *Phœbus.*

Compound Solution of Sulphate of Sodium.

℞. Sulphate of sodium, fourteen drachms.
Acetate of potassium, twenty-four grains.

Nitre, eighteen grains.
Tartar emetic, quarter of a grain.
Water, two pints.

Dissolve, and filter; in wineglassfuls, in habitual constipation. *Soubeiran.*

Emulsion with Sulphate of Sodium.

℞. Sulphate of sodium, one ounce.
Oil of almonds, one fl. ounce.
Yolks of eggs, two.
Syrup of manna, two fl. ounces.
Fennel water, six fl. ounces.

Mix. Dose, two spoonfuls. *Phœbus.*

Lemonade with Sulphate of Sodium.

℞. Sulphate of sodium, one ounce and a half.
Lemon juice, half an ounce.
Sugar, three ounces.
Water, sixteen fl. ounces.

Mix. *Radius.*

Clyster of Sulphate of Sodium.

℞. Sulphate of sodium, one ounce.
Barley water, six fl. ounces.

Dissolve, and add

Oil of flaxseed, two ounces.

Swediaur.

Lotion of Sulphate of Sodium.

℞. Sulphate of sodium, six ounces.
Soap, three drachms.
Lime water, eighteen fl. ounces.
Rectified spirit, six fl. drachms.

Mix. In chronic cutaneous affections. *Van Mons.*

Suppository of Sulphate of Sodium.

℞. Sulphate of sodium,
Soap, each, half an ounce.
Honey, sufficient.

Mix, and make four suppositories. *Phœbus.*

SODII SULPHIDUM.

SULPHIDE OF SODIUM.

℞. Solution of caustic soda, sp. gr. 1.33, at will.

Saturate with sulphuretted hydrogen gas, crystallize, keeping the liquid from contact with air, drain and preserve the colorless crystals. *Paris Codex.*

Sulphuretted Water.

℞. Sulphide of sodium,
Chloride of sodium,
each, two grains.
Water, twenty-one fl. ounces.

Deprive the water of air by boiling, make solution, and preserve in bottles. *Paris Codex.*

Sold in France as *artificial mineral water of Barèges, Saint Sauveur, etc.*

SODII SULPHIS.

SULPHITE OF SODIUM.

It occurs in white efflorescent prismatic crystals, is soluble in four parts of cold and less than one part of boiling water; it has a sulphurous taste and an alkaline reaction. It is purgative and is used in zymotic diseases. Its solution, locally applied to ulcers, acts as a stimulant to healthy action, sedative and deodorizer. When used internally, acidulous drinks should be avoided. Dose, three to six drachms a day, dissolved in water.

Solution of Sulphite of Sodium.

℞. Sulphite of sodium, one drachm.
Water, one fl. ounce.

Dissolve. As a mouth wash. *Aitken.*

Lotion of Sulphite of Sodium.

℞. Sulphite of sodium, one drachm.
Water, three drachms.
Glycerin, one ounce.

Dissolve and mix. In pruritus pudendi and sycosis. *Frizell.*

SODII SULPHO-CARBOLAS.

SULPHOCARBOLATE OF SODIUM.

℞. It is made by precipitating a solution of sulpho-carbolate of calcium with a solution of sulphate or carbonate of sodium, filtering, evaporating, and crystallizing.

Recommended by Dr. Samson as a means for introducing carbolic acid into the system without the disadvantages usually attending its direct administration. Dose, ten to forty grains, dissolved in water.

SODII SULPHURETUM.

SULPHURET OF SODIUM.

℞. Sulphur, twenty parts.
Carbonate of sodium, dried, twenty-seven parts.

Mix, heat in a matrass till melted; on cooling, detach, and keep in a well-closed vessel. *Cottereau.*

Bath with Sulphuret of Sodium.

℞. Sulphuret of sodium, ten ounces.
Solution of common salt and gelatine, (see page 546), four fl. ounces.

Mix with the water of the bath, at the moment the patient enters it. In chronic cutaneous affections. *Cadet.*

Mixture of Sulphuret of Sodium and Sal Ammoniac.

℞. Sulphuret of sodium, one drachm.
Chloride of ammonium, fifty grains.

Dissolve each in six ounces of water, mix the solutions, after having filtered them. As a lotion in itch, etc. *Van Mons.*

Lotion with Sulphuret of Sodium.

℞. Sulphuret of sodium, three ounces.
Soap, one ounce and a half.
Dissolve in
Alcohol, one pint.
Add to the solution
Lime water, eight pints.

In tinea capitis; the head to be washed with it every day, without removing the hair.

Liniment of Sulphuret of Sodium.

℞. Sulphuret of sodium, four parts and a half.
Sulphur,
Oil of almonds,
each, one part and a half.
Lard, six parts and a half.

Rub the powders with the lard, and gradually add the oil. As a lotion in chronic cutaneous diseases. *Van Mons.*

Ointment of Sulphuret of Sodium.

℞. Sulphuret of sodium, three drachms.
Lard, one ounce and a half.

Rub well together. As an application in itch. *Swediaur.*

SODII TARTRAS.

Tartrate of Sodium.

Effervescing Solution of Tartrate of Sodium.

℞. Tartaric acid, twenty-four troyounces.
Bicarbonate of sodium, twenty-two troyounces.
Sugar, sixty-four troyounces.
Water, sufficient.

Mix the bicarbonate with eight pints of water, and gradually add the acid; when dissolved add the sugar and sufficient water to make the measure twenty-one pints and five fl. ounces. Put up in twelve ounce bottles, and just before corking add thirty grains of bicarbonate of sodium, rubbed up with one drop of oil of lemon. Used as a refrigerant purgative. *J. L. Smith.*

SODII VALERIANAS.

Valerianate of Sodium.

℞. Fusel oil, four fl. ounces (imp.).
Bichromate of potassium, nine ounces (avoir.).
Sulphuric acid, six fl. ounces and a half (imp.).
Solution of soda, sufficient.
Distilled water, half a gallon (imp.).

Dilute the sulphuric acid with ten fl. ounces of water; and dissolve the bichromate in the remainder of the water. When both solutions are cool, place them in a matrass, add the fusel oil, shake well together, until the temperature of the mixture falls to about 90° F. Connect the matrass with a condenser, apply heat, and distil half a gallon. Saturate the distillate accurately with the caustic soda, remove the oil from the surface, and evaporate until watery vapor ceases to escape, and then raise the heat cautiously, so as to liquefy the salt. When the product has cooled and solidified, break it into pieces, and immediately put it into a stoppered bottle. *Brit. Ph.*

The valerianate of sodium is rarely used in medicine; but it constitutes the source from which all the other valerianates are obtained by double decomposition. Dose, one to five grains.

SOLIDAGO.

Golden Rod.

Of the numerous species of this genus indigenous to this country, one only, *S. odora*, has been used in medicine. In Europe, the *S. virgaurea* is used.

Sex. Syst. Syngen. *Nat. Syst.* Asteraceæ. It is a smoothish herb, with linear-lanceolate leaves, which are entire and pellucid punctate, and paniculate racemes of golden-yellow flowers. The tops and leaves are officinal; they have an agreeable anisate odor, and are used as an aromatic stimulant and carminative, in the form of infusion, made from one ounce to a pint of hot water. Dose of the infusion, a wineglassful.

SPIGELIA.

Pinkroot.

This is the root of the *Spigelia marilandica*, a beautiful, herbaceous, perennial plant, a native of the southern and southwestern parts of the United States.

Sex. Syst. Pentand. mong. *Nat. Syst.* Loganiaceæ.

Linn. Sp. Pl. 249. Griffith, Med. Bot. 466.

The root consists of numerous small, blackish fibres, forming a dense bunch, and arising from a short rhizome. The odor is faint, and the taste sweetish, bitter, and unpleasant. It is a safe and tolerably certain anthelmintic, with slight purgative and narcotic properties. It is given in powder, in the dose of one to two drachms for an adult, ten to twenty grains for a child; to be repeated morning and evening, for a few days, and followed by an active purgative.

Pinkroot with Calomel.

℞ Powdered pinkroot, ten grains.
Calomel, four grains.

Mix. To be taken two mornings in succession; and on the afternoon of the second day, followed by a purgative. For children above four years of age. *Ellis.*

Pinkroot with avine.

℞ Powdered pinkroot,
" senna, each,
two scruples.
" savine, twelve grains.

Mix, and divide into six powders. One, every morning, for three days, followed by a purgative. *Ellis.*

Infusion of Pinkroot.

℞ Pinkroot, half a troyounce.
Boiling water, one pint.

Macerate for two hours, in a covered vessel, and strain. *U. S. Ph.*

Four fl. drachms to a fl. ounce to children, four to eight fl. ounces to adults, morning and evening, followed by a purgative.

Compound Infusion of Pinkroot. (Worm Tea.)

℞ Pinkroot, half an ounce.
Senna, two drachms.
Manna, one ounce.
Savine, two scruples.
Fennel seed, two drachms.
Boiling water, one pint.

Infuse. Dose, one tablespoonful for a child two years old, three times a day. *Ellis.*

℞ Pinkroot, one ounce.
Bruised rhubarb, one drachm.
Senna, two drachms.
Semen contra, one drachm.
Manna, two drachms.
Coriander, half a drachm.
Boiling water, one quart.

Infuse. A small teacupful three times a day. *Hays.*

Fluid Extract of Pinkroot.

℞ Pinkroot, in powder, No. 60, sixteen troyounces.
Alcohol, eight fl. ounces.
Glycerin,
Water, each, four fl. ounces.

Moisten the powder with four fl. ounces of the mixed liquids, pack in a percolator, add the remaining mixture, and macerate for four days; then, with diluted alcohol displace twenty-six fl. ounces, reserving the first ten, add to the remainder four fluid-ounces of glycerin, evaporate to six fluid-ounces, and mix with the reserved portion. *U. S. Ph.*

Compound Fluid Extract of Pinkroot.

℞ Bruised pinkroot, four ounces.
Senna, three ounces.
Savine, one drachm.
Manna, one ounce.
Sugar, eight ounces.
Alcohol, half a pint.
Boiling water, two pints.

On the pinkroot, senna, and savine, pour the boiling water, and cover till cool. Then add the alcohol, and macerate for twenty-four hours; transfer to a displacement apparatus, and, having displaced, evaporate the product, at a low heat, to twelve fluid-ounces, in which dissolve the manna and sugar, and evaporate to one pint. One fl. ounce contains the strength of two drachms of pinkroot and a drachm and a half of senna. Dose, for a child, a teaspoonful. *T. Estlack.*

Fluid Extract of Pinkroot and Senna.

℞. Fluid extract of spigelia, ten fl. ounces.
" " senna, six fl. ounces.
Oil of anise,
" caraway, each, twenty minims.

Mix thoroughly to dissolve the oils. *U. S. Ph.*

Dose, one fl. drachm to a child three years old.

SPIRÆA.

Hardhack.

The *U. S. Ph.* indicates the root of *Spiræa tomentosa* as officinal; but this portion is less active than the leaves and flowers. It is a beautiful shrub, with spikes of rose-colored flowers, and leaves of a dark green color above and white beneath.

Sex. Syst. Icosand. pentagyn. *Nat. Syst.* Rosaceæ.

Linn. Sp. Pl. 701. Griffith, Med. Bot. 280.

The leaves and flowers are usually sold in packages; they have an odor not unlike that of black tea, and a bitter, very astringent taste. The Hardhack is a tonic and astringent of considerable powers, and has the advantage of seldom being offensive to the stomach.

Decoction of Hardhack.

℞. Hardhack, one ounce.
Water, one pint and a half.

Boil down to one pint. Dose, from one to two fl. ounces. *Wood.*

Extract of Hardhack.

℞. Hardhack, at will.
Water, sufficient.

Exhaust by the process of displacement, and evaporate the product by means of a water-bath to proper consistence. Dose, five grains to a scruple. *Griffith.*

SPIRITUS ÆTHERIS NITROSI.

Spirit of Nitrous Ether. Sweet Spirit of Nitre.

℞. Nitric acid, three fl. ounces.
Sulphuric acid, two fl. ounces.
Fine copper wire, two ounces.
Rectified spirit, sufficient.

To twenty fl. ounces of the spirit add the sulphuric acid, then two and a half fl. ounces of the nitric acid, and distil from a glass retort containing the copper at a temperature between 170° and 180°. When twelve fl. ounces have passed over, allow to cool, add the remaining nitric acid and distil as before, to make the entire distillate measure fifteen fl. ounces. Add to this forty fl. ounces of alcohol, or sufficient to make the specific gravity of the mixture 0.845. *Brit. Ph.*

Spirit of nitrous ether of *U. S. Ph.* is made by the same process, and is of one-half this strength.

℞. Alcohol, twelve parts.
Nitric acid, ten parts.

Distil ten parts, neutralize distillate with magnesia, and rectify. *Ph. Germ.*

Mixture of Sweet Spirit of Nitre.

℞. Sweet spirit of nitre, one fl. drachm.
Hoffmann's anodyne,
Aromatic ammoniated alcohol, each, two fl. drachms.
Mint-water, six fl. ounces.

Mix. Dose, a tablespoonful occasionally. *Brera.*

Mixture of Hyponitrous Ether.

℞. Powdered ipecacuanha, half a drachm.
Boiling water, sufficient

to obtain six ounces of infusion. Strain and add

Spirit of nitrous ether, one fl. ounce.
Extract of juniper berries, one ounce.

Mix. Dose, a tablespoonful every two hours, in the dropsical swellings consecutive to scarlatina. *Radius.*

SPONGIA.

Sponge.

Sponge is the horny skeletons of small polymorphous marine animals, found attached to submerged rocks in the seas of most warm climates. As found in the shops, it is in the form of a light, porous mass, of a yellowish-brown color, and very elastic, and readily imbibing fluids.

It is used for the purpose of cleansing the surfaces of wounds and ulcers, and, in a compressed state, to form tents to dilate sinuses, etc. When burnt, or reduced to charcoal, it has been given successfully in some diseases; probably owing its efficacy to the presence of iodine.

Burnt Sponge.

℞. Sponge, at will.

Cut in pieces, separate any extraneous matters by beating, then burn in a closed iron vessel till it becomes black and friable, and rub into a fine powder. *U. S. Ph.*

Used in goitre, glandular swellings of a scrofulous nature, etc.; in doses of one to three drachms.

Powder of Burnt Sponge.

℞. Burnt sponge, ten grains.
Powdered rhubarb, four grains.

Mix. To be taken morning and evening. In scrofula. *Hulse.*

Compound Powder of Burnt Sponge.

℞. Burnt sponge, six drachms.
Powdered cinnamon,
" ginger,
each, one drachm.
Sulphate of potassium,
two drachms.
Sugar, five drachms.

Mix. *Greek Ph.*

Dose, a teaspoonful three times a day, in scrofula.

℞. Burnt sponge, four drachms.
Carbonate of magnesium, Nitre, White sugar, each, two drachms.

Rub into powder. Dose, as above. *Clarus.*

Bolus of Burnt Sponge.

℞. Burnt sponge, one scruple.
Sulphate of potassium,
fifteen grains.
Balsam of sulphur (*Lond. Ph.*), ten drops.
Syrup, sufficient.

Mix, and form two boluses. One, morning and evening, in scrofula. *Cadet.*

Electuary of Burnt Sponge.

℞. Burnt sponge, half an ounce,
Syrup of orange-peel, one ounce and a half.

Mix. Two to four spoonfuls a day, in goitre, etc. *Radius.*

STANNUM.

Tin.

Powder of Tin.

℞. Tin, at will.

Melt in an iron vessel, and, while cooling, stir till reduced to powder, which is then to be sifted. *U. S. Ph.* 1850.

As an anthelmintic, in doses of half an ounce, mixed with syrup or molasses, for several mornings, followed by an active purgative.

Electuary of Tin.

℞. Powder of tin, one ounce.
Extract of wormwood,
Powdered jalap, each, one drachm.
Compound syrup of chicory, sufficient.

Mix. To be taken in twelve doses. *Foy.*

Ointment of Tin.

℞. Amalgam of tin, half an ounce.
Rose ointment, one ounce.
Red precipitate, two drachms.
Oil of peppermint, twenty drops.

Rub well together. Said to be useful in hemorrhoids. *Brera.*

STANNI CHLORIDUM.

Chloride of Tin.

℞. Tin, at will.
Muriatic acid, sufficient.

Dissolve, and crystallize. *Van Mons.*

Used as an antispasmodic and a vermifuge. Dose, one-eighth to one-half of a grain.

Lotion of Chloride of Tin.

℞. Chloride of tin, one to six grains.
Distilled water, six ounces.

Dissolve. In cutaneous diseases of a chronic and obstinate character. *Schlessinger.*

STANNI OXIDUM.

Oxide of Tin.

℞. Tin, at will.

Keep it melted in an open vessel, constantly stirring, till it is reduced into a gray powder, and sift. *Swediaur.*

Has been recommended in tapeworm, in doses of five or six grains, several times a day.

STANNI SULPHURETUM.

Sulphuret of Tin.

℞. Tin, three parts.
Sulphur, one part.

Heat in a crucible, as long as a flame arises; then cool, and pulverize. As a vermifuge, in doses of ten to twenty grains.

Van Mons.

Compound Powder of Sulphuret of Tin.

℞. Sulphuret of tin, four parts.
Powdered jalap, two parts.
Assafetida, one part.

Mix. Twelve to twenty grains three times a day, as a vermifuge. *Port. Ph.*

Aurum Musivum.
(Mosaic Gold.)

℞. Tin, twelve parts.

Melt at a low heat in an earthen crucible; add

Mercury, six parts,

to make an amalgam; add

Sulphur, seven parts.
Sal ammoniac, six parts.

Rub well together, introduce into a matrass, and heat moderately until sulphuretted hydrogen ceases to be given off. When cold, separate and preserve the upper yellow layer of the product.

Dorvault.

Employed under the name of *bronze powder* for ornamental work. It was formerly used as a vermifuge.

STAPHISAGRIA.

Stavesacre.

The seeds of *Delphinium staphisagria*, a beautiful annual plant, with terminal racemes of blue flowers; a native of the south of Europe.

Sex. Syst. Polyand. trigyn. *Nat. Syst.* Ranunculaceæ.

Linn. Sp. Pl. 750. Lindley, Med. Flor. 9.

The seeds are large, somewhat triangular, of a brown color, a slight, but unpleasant odor, and an acrid, bitter, nauseous taste. Their active principle, *delphinia*, is occasionally employed. They are principally used to destroy lice in the hair, but also for other purposes.

Decoction of Stavesacre.

℞. Stavesacre, one ounce.
Water, one pint and a half.

Boil down to a pint, and strain. As a lotion in itch. *Swediaur.*

Vinegar of Stavesacre.

℞. Stavesacre, one part.
Vinegar, sixteen parts.

Macerate and express. As a wash to destroy vermin in the hair. *Béral.*

Ointment of Stavesacre.

℞. Stavesacre, powdered, one part.
Lard, three parts.

Mix thoroughly. To destroy lice.

Guibourt.

Compound Ointment of Stavesacre.

℞. Powdered stavesacre, Sulphur, Vinegar, Honey, each, one part.
Olive oil, two parts.

Mix. To destroy lice and nits.

Dorvault.

STATICE.

Marsh Rosemary.

The root of the *Statice Caroliniana* is occasionally employed in medicine. This little plant is indigenous in the United States, growing in salt marshes near the sea coast.

Sex. Syst. Pentand. pentagyn. *Nat. Syst.* Plumbaginaceæ.

Nuttall, Gen. i. 206. Griffith, Med. Bot. 525.

Marsh rosemary is a powerful astringent, and is much used in the New England States, in the treatment of diarrhœas, aphthous and ulcerative affections of the mouth and fauces, and in other cases requiring the use of astringents. Dose, ten to thirty grains.

Decoction of Marsh Rosemary.

℞. Root of marsh rosemary, bruised, one ounce.
Boiling water, one pint.

Boil for fifteen minutes, and strain. Dose, a wineglassful.

STILLINGIA.

Queen's Root.

The root of *Stillingia sylvatica* is the part used. The Queen's root, or Queen's delight, as it is often termed, attains a height of two or three feet. It is found in the pine barrens of the Middle States.

Sex. Syst. Moncœc. monad. *Nat. Syst.* Euphorbiaceæ.

Willd. Sp. Pl. iv. 588.

In large doses (twenty to thirty grains), it is emetic and cathartic; in doses of three to five grains, it is an alterative.

Fluid Extract of Stillingia.

℞. Stillingia, in powder, No. 60, sixteen troyounces.
Glycerin, three fl. ounces.
Alcohol, twelve fl. ounces.
Water, one fl. ounce.

Moisten the powder with four fl. ounces of the mixed liquids, pack firmly in a percolator, add the remaining mixture, and macerate for four days. Then, with diluted alcohol, displace twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Decoction of Queen's Root.

℞. Bruised Queen's root, one ounce.
Boiling water, twenty fl. ounces.

Boil down to a pint, and strain. Dose, one or two fl. ounces. *G. B. Wood.*

STRAMONIUM.

STRAMONIUM.

THORN-APPLE.—JAMESTOWN WEED.

Several parts of the *Datura stramonium* are used in medicine, as the root, leaves, and seeds. It is an annual herbaceous plant, found in the United States, having a rank, fetid odor, and bearing large, funnel-shaped, white flowers.

Sex. Syst. Pentand. monog. *Nat. Syst.* Solanaceæ.

Linn. Sp. Pl. 255. Griffith, Med. Bot. 490.

The leaves have a fetid, narcotic odor, and a bitter, nauseous taste; the odor is lost on drying, but the taste remains. The seeds are small, reniform, of a brownish-black color, inodorous, of a bitter, somewhat acrid taste. Stramonium is a powerful narcotic, and is much used in a variety of affections, both internally and externally. The dose of the powdered leaves is from two to three grains, of the seeds about a grain.

Pills of Stramonium Seed.

℞. Powdered stramonium seed, ten grains.
" camphor, one drachm.
" savine, five scruples.
Extract of seneka, four scruples.

Mix, and make pills of two grains. Dose, six, three times a day. In rheumatism. *Vogt.*

Compound Stramonium Pills.

℞. Extract of stramonium, one drachm.
Soap, two drachms.
Powdered gum Arabic, one scruple.
" liquorice, two scruples.
Mucilage of tragacanth, sufficient.

Make mass, and divide into sixty pills. One, night and morning, in asthma. *Halford.*

Extract of Stramonium Seed.

℞. Stramonium seed, in powder, No. 50, sixteen troyounces.
Diluted alcohol, sufficient.

Moisten the powder with four fl. ounces of the alcohol, then introduce into a percolator, add twelve fl. ounces of diluted alcohol, macerate for four days, and exhaust by means of diluted alcohol. Distil the filtered liquor, and evaporate the residue to a proper consistence. *U. S. Ph.*

Brit. Ph. directs the seeds to be freed from fixed oil, previous to being exhausted by diluted alcohol. *Paris Codex* prepares with sixty per cent. alcohol, an extract which is to be dissolved in four times its weight of cold water, the solution filtered, and evaporated.

Dose, a quarter to half a grain twice a day, gradually increasing.

Extract of Stramonium Leaves.

℞. Stramonium leaves, recently dried, and in powder, No. 60, sixteeen troyounces.
Alcohol, one pint.
Diluted alcohol, sufficient.

Exhaust the powder, using first the alcohol, afterwards diluted alcohol; evaporate the first pint of tincture spontaneously to three fl. ounces, and the remainder, by means of a water-bath, to the consistence of a syrup. Mix the liquids, and evaporate at or below 120° to an extract. *U. S. Ph.*

Used like the next.

Inspissated Juice of Stramonium Leaves.

℞. Stramonium leaves, twenty parts.

Bruise in a stone mortar, with a little water. Express, and heat the juice to near the boiling point; strain, evaporate to two parts, and mix with an equal weight of alcohol. After twenty-four hours ex-

press and wash the precipitate with diluted alcohol, and evaporate the filtrate to the proper consistence. *Ph. Germ.*

Paris Codex directs to evaporate the juice to one-third, cool, strain after twelve hours, and evaporate to an extract.

Dose, one grain twice a day, gradually increasing till it produces its effects.

Mixture of Extract of Stramonium Seed.

℞. Extract of stramonium seed, twelve grains.
Antimonial wine, half a fl. ounce.

Dissolve. Ten drops every three hours, in an infusion of balm, as an antispasmodic. *Hufeland.*

Anti-rheumatic Lotion.

℞. Stramonium seed, bruised, one ounce.
Alcohol, one pint.

Infuse, strain, and add

Opium, in powder, one ounce.
Camphorated alcohol, two fl. ounces.

Mix. In frictions to the diseased part. *Pierquin.*

Syrup of Stramonium.

℞. Sugar, fifteen ounces.
Tincture of stramonium, two fl. ounces.
Distilled water, seven fl. ounces.

Mix, and form syrup without heat, and strain. *Béral.*

℞. Stramonium seed, bruised, one ounce.
Vinegar, one pound.

Infuse for two days, strain, and add

Sugar, two pounds.

Dissolve. *Wirt. Ph.*

Tincture of Stramonium Seed.

℞. Stramonium seed, in powder, No. 50, four troyounces.
Diluted alcohol, sufficient.

Obtain by percolation two pints. *U. S. Ph.*

The tincture of *Brit. Ph.* is of nearly the same strength; that of *Ph. Germ.* is about one-third weaker in stramonium seeds, but is made with alcohol sp. gr. 0.892.

Dose, from twenty to forty drops, two or three times a day, increasing till it affects the system.

Tincture of Stramonium Leaves.

℞. Filtered juice of stramonium leaves,
Alcohol (.847), equal parts.

Mix, and filter at the end of twenty-four hours. *Béral.*

Ethereal Tincture of Stramonium.

℞. Stramonium seed, one part.
Sulphuric ether, four parts.

Macerate for a week, and filter. Dose, two to three drops. *Soubeiran.*

Wine of Stramonium.

℞. Stramonium seed, bruised, two ounces.
Wine, eight fl. ounces.
Alcohol, one fl. ounce.

Macerate for some days, and filter. Dose, six drops to a fl. scruple. *Van Mons.*

Ointment of Stramonium.

℞. Fresh stramonium leaves, one pound.
Lard, three pounds.
Wax, half a pound.

Boil the leaves in the lard till they become crisp, then strain through linen; afterwards add the wax, previously melted, and stir till cold. *U. S. Ph.* 1840.

℞. Extract of stramonium, one drachm.
Water, half a fl. drachm.
Lard, seven drachms.

Rub the extract with the water, and then with the lard. *U. S. Ph.*

A valuable anodyne application to painful hemorrhoids, and tumors.

Compound Ointment of Stramonium.

℞. Bark of the root of bittersweet,
Stramonium leaves,
Hemlock leaves,
Deadly nightshade leaves,
Yellow dock root, } each, two ounces.

Bruise the roots and leaves, and simmer them in spirit; then add

Lard, one pound,

and simmer gently till the leaves are crisped. Express through linen, and add

Venice turpentine, two ounces.

Stir well together. A useful application to indolent and glandular swellings.
Ecl. Med. Jour.

Oleo-infusion of Stramonium.

℞ Fresh stramonium leaves, one part.
Olive oil, two parts.

Heat till all moisture is driven off, then express and filter. *Paris Codex.*

STRYCHNIA.

STRYCHNINE.—STRYCHNIA.

℞ Nux vomica, rasped, forty-eight ounces.
Powdered lime, six ounces.
Muriatic acid, three fl. ounces and a half.
Alcohol, Diluted sulphuric acid, Solution of ammonia, Purified animal charcoal, Water, each, sufficient.

Digest the nux vomica in two gallons of water, acidulated with one-third of the muriatic acid, for twenty-four hours; boil for two hours, express, and strain through linen. Boil residue twice successively, in the same quantity of acidulated water, and proceed as before. Mix the decoctions, and evaporate to consistence of thin syrup; add lime, previously mixed with a pint of water, and boil for ten minutes, often stirring. Pour mixture into a double linen bag, and wash well with water; press, dry, and powder the precipitate. Treat the powder repeatedly with boiling alcohol, till it loses its bitterness; mix the solutions, and distil off the alcohol in a water-bath. Mix the residue with water, apply heat, and drop in sufficient diluted sulphuric acid to dissolve the strychnia; treat with animal charcoal at boiling temperature; filter, evaporate, and crystallize. Dissolve the crystals in water, and add solution of ammonia to precipitate the strychnia. Dry the strychnia on bibulous paper. *U. S. Ph.*

℞ Powdered nux vomica, nine pounds.
Water,
Sulphuric acid, each, sufficient.
Powdered quicklime, ten ounces.
Alcohol, fifteen pints.

Mix the nux vomica with sufficient water to form a thin paste, and keep at the temperature of 70 or 80°, until gas ceases to form; express, and boil the residue in several successive portions of water, and express. Set liquid aside to deposit; decant, and evaporate to three gallons. Add nine ounces of quicklime, and after six hours' contact, express strongly; heat the liquid to the boiling point, and add a slight excess of sulphuric acid; separate the liquid by decantation, and evaporate to four pints; add one ounce of quicklime, and act as before, adding this precipitate to the former; dry, and powder; digest in five pints of alcohol diluted with five pints of water, at a gentle heat; separate precipitate, and boil in five pints of alcohol twice; mix, and filter solutions; distil off four-fifths, and set aside to crystallize. *Molyn.*

Very active and dangerous. Dose, one-sixteenth to one-tenth of a grain, at first, carefully watching the effects, and slowly increasing.

Compound Powder of Strychnia.

℞ Strychnia, one grain.
Black oxide of iron, Sugar, Gum Arabic, each, one drachm.

Rub well together, and divide into twelve powders. *Brera.*

Pills of Strychnia.

℞ Strychnia, two grains.
Conserve of roses, thirty-six grains.

Mix, and make twenty-four pills. One or two, morning and evening, in paralysis.
Magendie.

℞ Strychnia, two grains.
Extract of valerian, sufficient.

Mix well, and make thirty-two pills. One, early in the morning, for five days; then one, morning and evening, in amaurosis.
Furnari.

Stimulant Pills.

℞ Strychnia, one grain.
Acetic acid, one minim.
Crumb of bread, one scruple.

Mix thoroughly, and make ten pills. One to be taken every six hours, in the paralysis arising from lead. *A. T. Thomson.*

Tincture of Strychnia.

℞ Strychnia, three grains.
Alcohol (.842), one fl. ounce.

Dissolve. Dose, from six to twenty-four drops, twice a day. *Magendie.*

Mixture of Strychnia.

℞ Strychnia, one grain.
Distilled water, two fl. ounces.

White sugar, two drachms.
Acetic acid, three drops.

Mix. One fl. drachm contains one-sixteenth of a grain of strychnia. *Beasley.*

Elixir of Pyrophosphate of Iron, Quinia, and Strychnia.

℞. Sulphate of quinia, sixty grains.
Strychnia, one grain.
Citric acid, five grains.

Triturate together, and add

Stronger alcohol, three fl. ounces.
Spirit of orange, eight minims.
Syrup (heated to 150°), six fl. ounces.

Stir until quite clear, and add solution of

Pyrophosphate of iron, four drachms.
Water, seven fl. ounces.

Finally neutralize carefully with water of ammonia. A tablespoonful contains $\frac{1}{48}$ grain of strychnia. *C. L. Diehl.*

Elixir of Iron, Pepsin, Bismuth, and Strychnia.

℞. Ammonio-citrate of iron,
" " bismuth,
Pepsin (Scheffer's formula), each, two hundred and fifty-six grains.
Strychnia, two grains.
Oil of anise, } each,
" cinnamon, } each,
" fennel, } two drops.
Tinct. fresh orange-peel, one fl. ounce.
Rose water,
Water, each, six fl. ounces.
Sugar, four and a half troyounces.

Dissolve and mix. *Maryland Coll. Ph.*

A teaspoonful contains $\frac{1}{64}$ grain of strychnia.

Elixir of Iron and Strychnia.

℞. Ammonio-citrate of iron, one hundred and twenty-eight grs.
Strychnia, one grain.
Citric acid, five grains.
Distilled water, half a fl. ounce.
Simple elixir, fifteen and a half fl. ounces.

Dissolve and mix. *Maryland Coll. Ph.*

A tablespoonful contains $\frac{1}{32}$ grain of strychnia.

Ointment of Strychnia.

℞. Strychnia, sixteen grains.
Lard, one ounce.

Rub well together. As a friction on paralyzed parts. *Sandras.*

Strychnia Collyrium.

℞. Strychnia, two grains.
Diluted acetic acid, one drachm.
Distilled water, one ounce.

Mix. A few drops of this applied to the eye, several times a day, is stated to be beneficial in amaurosis. *Henderson.*

Liniment of Strychnia.

℞. Strychnia, thirty grains.
Olive oil, one ounce and a half.

Rub well together. Ten drops to be rubbed on the temples, in amaurosis. *Neligan.*

STRYCHNIÆ ACETAS.

ACETATE OF STRYCHNIA.

℞. Strychnia, at will.
Acetic acid, sufficient

to dissolve; evaporate and crystallize. *Griffith.*

Solution of Acetate of Strychnia.

℞. Acetate of strychnia, three grains.
Alcohol, one fl. drachm.
Cinnamon water, seven fl. drachms.

Dissolve. Five drops twice a day. *Radius.*

℞. Strychnia, one grain.
Distilled vinegar, one fl. drachm.
" water, nine fl. drachms.

Mix. Dose, one fl. drachm; containing one-tenth of a grain. *A. T. Thomson.*

Tincture of Acetate of Strychnia.

℞. Acetate of strychnia, one grain and a half.
Alcohol, half a fl. ounce.

Dissolve. Five to twenty drops, twice a day, in syphilitic pains in the bones. *Fricke.*

STRYCHNIÆ IODAS.

IODATE OF STRYCHNIA.

℞. Strychnia, at will.
Iodic acid, sufficient

to saturate; dissolve in boiling alcohol, filter, and crystallize. *Magendie.*

℞ Solution of muriate of strychnia, at will.
Solution of iodate of sodium, sufficient

to precipitate; treat as the last. *Jourdan.*

Dose, one-eighth of a grain, in pill. One, morning and evening, gradually increasing. In paraplegia.

STRYCHNIÆ MURIAS.

Muriate of Strychnia.

℞ Strychnia, at will.
Muriatic acid, sufficient

to saturate; evaporate and crystallize. *Cottereau.*

Dose, one-eighth of a grain.

Solution of Strychnia.

℞ Crystallized strychnia, four grs.
Diluted muriatic acid, six minims.
Rectified spirit, two fl. drachms.
Distilled water, six fl. drachms.

Dissolve the strychnia, with the aid of heat, in the acid previously diluted with one-half the water, and add the remaining liquids. Dose, five to ten minims. *Brit. Ph.*

STRYCHNIÆ NITRAS.

Nitrate of Strychnia.

℞ Strychnia, at will.
Nitric acid, sufficient

to saturate, with the aid of heat; filter, while hot, evaporate, and crystallize. *Giordano.*

This is as active as strychnia, and is used in similar cases. Dose, one-eighth of a grain.

Ointment of Nitrate of Strychnia.

℞ Nitrate of strychnia, one grain and a half.
Lard, two drachms.

Rub well together. Used as a friction on paralyzed parts. *Wendt.*

STRYCHNIÆ PHOSPHAS.

Phosphate of Strychnia.

Solution of Phosphate of Strychnia.

℞ Strychnia, two grains.
Dilute phosphoric acid, one fl. ounce.

Dissolve. Ten minims contain $\frac{1}{24}$ grain of strychnia. *Maryland Coll. Ph.*

STRYCHNIÆ SULPHAS.

Sulphate of Strychnia.

℞ Strychnia, one troyounce.
Diluted sulphuric acid, sufficient.
Water, a pint.

Heat gently the strychnia with the water, drop in the acid (about nine fl. drachms) until neutralized and dissolved; filter and crystallize. *U. S. Ph.*

Hypodermic Injection of Strychnia.

℞ Sulphate of strychnia, two grains.
Distilled water, two drachms.

Dissolve. Dose, one to five and even ten minims, in paralysis and neuralgia. *Eulenburg.*

Syrup of Sulphate of Strychnia.

℞ Sulphate of strychnia, five grains.
Water, four hundred grains.
Syrup, forty-one troyounces.

Dissolve the sulphate in the water and mix with the syrup.

Each fl. ounce contains nearly one-sixth of a grain of the sulphate. *Paris Codex.*

STYRAX.

Storax

Is the balsam obtained from *Liquidambar orientale*, a tree indigenous to the Levant. It is obtained by steaming the bruised bark, and then expressing it. It was formerly obtained from *Styrax officinale.*

Sex. Syst. Monœc. Polyand. *Nat. Syst.* Balsamifluæ.

Several kinds of Storax are employed; that in grains, in mass, in calamita, and the liquid. It has a fragrant odor, and a warm, aromatic taste. It is a stimulating expectorant. Dose, ten to twenty grains, twice a day.

Purified Storax.

℞ Storax,
Alcohol, each, sufficient.

Dissolve, and strain; distil off the alcohol by a gentle heat, till the storax is of proper consistence. *U. S. Ph.* 1850.

Compound Pills of Storax.

℞ Purified storax, three drachms.
Powdered opium,
Saffron, each, one drachm.

Beat together. Five grains contain one of opium. *Lond. Ph.*

Syrup of Storax.

℞. Purified storax, three ounces.
Alcohol, one fl. ounce.
Water, one pint.

Digest for twelve hours on a water-bath, and add

Sugar, two pounds.
Orange-flower water, one fl. ounce.

Mix. *Giordano.*

Ointment of Storax.

℞. Liquid storax, Yellow wax, Elemi, each, ten parts.
Resin, eighteen parts.
Olive oil, fifteen parts.

Fuse the wax, elemi, and resin at a moderate heat, remove from the fire, stir in the storax, and afterwards the oil, strain and agitate until it becomes cool. *Paris Codex.*

Used as a stimulant for indolent ulcers.

Ointment of Storax and Turpentine.

℞. Turpentine ointment,
Purified liquid storax,
equal parts.

Mix. *Digestif animé* of the French. *Paris Codex.*

SUCCINUM.

Amber.

This is a solid body, of various shades of yellow; it is translucent or opaque, and of a vitreous fracture; brittle, tasteless, inodorous, except when heated; then exhaling a peculiar, penetrating, but rather agreeable smell. It is a resin found in a fossil state, in various parts of the world. Not much used in medicine, but extensively employed in the arts.

Fumigating Powder.

℞. Amber, Mastich, Juniper berries, each, four parts.
Cascarilla, one part.

Powder, and mix. *Scherf.*

Oil of Amber.

℞. Powdered amber, at will.

Mix, with an equal weight of sand, in a glass retort, which is to be only half filled. Then distil on a sand-bath, gradually increasing the heat. Separate the oil from product, and keep in well-closed bottles. *U. S. Ph.*

Rectified Oil of Amber.

℞. Oil of amber, one pint.
Water, six pints.

Mix in a glass retort; distil till four pints of water, with the oil, have passed over; then separate the oil, and keep it in well-stopped bottles. *U. S. Ph.*

Stimulant and antispasmodic; in doses of five to fifteen drops; also used externally.

Artificial Musk.

℞. Oil of amber, one part.

Add gradually

Nitric acid, two parts.

Let react for twenty-four hours, and wash in cold water. *Van Mons.*

℞. Strong nitric acid, three drachms and a half.

Add very gradually to

Rectified oil of amber, one drachm,

in a large glass vessel. When action has ceased, permit to rest for twenty-four hours; then remove the upper or resinous portion, and wash it well in cold and then in hot water, till all acid is removed. *Williams.*

Used in those cases in which musk is applicable.

Tincture of Artificial Musk.

℞. Artificial musk, one part.
Alcohol, eight parts.

Dissolve with a gentle heat.

Forty drops as an antispasmodic. Useful in doses of five or six drops, in hooping-cough in children. *Van Mons.*

℞. Artificial musk, two drachms.
Alcohol, eight ounces.

Dissolve, and filter. Dose, from twenty-five drops to a drachm, according to age. *Williams.*

Emulsion of Artificial Musk.

℞. Artificial musk, twelve grains.
Blanched almonds, four.

Triturate well together, and gradually add

Water, six fl. ounces.

Dose, for a child of two years, two teaspoonfuls. Valuable in hooping-cough. *Hufeland.*

Liniment of Oil of Amber.

℞. Oil of amber, two fl. drachms.
" olives, half fl. ounce.
Laudanum, two fl. drachms.
Brandy, three fl. ounces.

Mix. To be rubbed between the shoulders, in hooping-cough and infantile convulsions. *Parrish.*

℞. Oil of amber,
" cloves, each, half an ounce.
" olives, one ounce.

Mix. *Beasley.*

℞. Oil of amber, one drachm.
Expressed oil of nutmeg, two drachms.

Mix. As a friction in hysteria and headache.

Tincture of Amber.

℞. Powdered amber, one ounce.
Alcohol, fifteen ounces.

Digest for six days, and filter. *Paris Codex* 1837.

Dose, forty to sixty drops.

Ethereal Tincture of Amber.

℞. Oil of amber, one part.
Sulphuric ether, fifteen parts.

Mix. Dose, fifteen to thirty drops. *Béral.*

Alkaline Tincture of Amber.

℞. Powdered amber, two ounces.
Solution of carbonate of potassium, half an ounce.
Diluted alcohol, eight fl. ounces.

Digest for some days, and filter. Dose, twenty to forty drops. *Spielmann.*

Oil of Amber and Copaiba.

℞. Balsam copaiba, } each, one drachm.
Oil of turpentine, }
" amber, }

Mix. Dose, thirty to sixty drops, thrice daily, to be followed by half a wineglassful of claret. In leucorrhœa. Known in Austria as *French balsamic elixir.*

Balsam of Amber.

℞. Tincture of amber, two fl. ounces.
" myrrh, one fl. ounce.
Oil of turpentine, half fl. ounce.

Mix. As an antispasmodic friction. *Radius.*

℞. Powdered amber, one ounce.
Oil of turpentine, two ounces.

Digest at a gentle heat. *Bate.*

Eau de Luce.

℞. Oil of amber, two drachms.
White soap,
Balsam of Mecca, each, fifteen grains.
Rectified spirit, six ounces.

Macerate for eight days, and filter. To one fl. drachm of this, add two fl. ounces of water of ammonia. Used in the treatment of snake-bites, as an antispasmodic, etc. *Redwood.*

Mixture of Oil of Amber.

℞. Rectified oil of amber, eighty drops.
Gum Arabic,
Sugar, each, half an ounce.
Tincture of tolu, two fl. drachms.
Distilled water, four fl. ounces.

Mix. A tablespoonful every two or three hours, in spasmodic cough. *Ellis.*

SULPHUR.

Sulphur.

Three officinal forms of sulphur are admitted in the pharmacopœia, viz., *Sublimed Sulphur*, *Washed Sulphur*, and *Precipitated Sulphur.*

Sublimed Sulphur.

℞. Sulphur, at will.

Heat at a temperature of 500° to 600° F., in an earthen vessel, and condense the fumes in a large receiver.

Washed Sulphur.

℞. Sublimed sulphur, twelve parts.
Distilled water, eight parts.
Water of ammonia, one part.

Mix together, macerate for three days, transfer to a strainer, wash well with water, and dry. *Ph. Germ.*

Other pharmacopœias wash with water only as long as any acid reaction may be observed.

Precipitated Sulphur.

℞. Sublimed sulphur, twelve troyounces.
Lime, eighteen troyounces.
Water, two gallons.
Muriatic acid, sufficient.

Slake the lime with a little water, mix it with the sulphur, add the rest of the water, boil for two hours, occasionally adding water, and filter. Dilute the liquid with an equal bulk of water, and add sufficient muriatic acid to precipitate the sulphur. Wash the precipitate till the washings are tasteless, and dry it. *U. S. Ph.*

Dose, one drachm.

Powder of Sulphur and Camphor.

℞. Washed sulphur,
Sugar, each, half a drachm.
Camphor, six grains.

Mix, and divide into six powders. One, every hour, in mercurial cachexy. *Radius.*

Powder of Sulphur and Liquorice.

℞. Sulphur, one drachm.
Powdered fennel seed,
two drachms.
" liquorice, four drachms.

Mix. A teaspoonful occasionally, in catarrh. *Phœbus.*

Powder of Sulphur and Orris Root.

℞. Washed sulphur,
eight to eighteen grains.
Sugar of milk, one scruple.
Powdered orris
root, one to three drachms.

Mix, and divide into eight powders. One, every two hours, in milk, in the catarrh of children. *Kopp.*

Compound Powder of Sulphur.

℞. Sulphur, one ounce.
Powdered fennel, one drachm.
" gum Arabic,
" sugar, each, two ounces.

Mix. Dose, half a drachm to a drachm, in dysentery. *Van Mons.*

℞. Sulphur, two drachms.
Cream of tartar, six drachms.
Powdered fennel, one drachm.
" sugar, half an ounce.

Mix. A spoonful two or three times a day, as a laxative, in constipation. *Radius.*

℞. Sublimed sulphur,
one drachm and a half.
Brown sugar,
Cream of tartar, each, two drachms.

Mix, and make a powder. To be taken twice a day, in itch, impetigo, or acne. *Ainslie.*

Powder of Sulphur and Cream of Tartar.

℞. Sublimed sulphur, half an ounce.
Cream of tartar, one ounce.

Mix with molasses. A teaspoonful four or five times a day, to children, in cutaneous affections. *Ellis.*

Powder of Sulphur and Magnesia.

℞. Precipitated sulphur,
Magnesia, each, half an ounce.

Mix. A teaspoonful four or five times a day, as an aperient. *Ellis.*

Powder of Sulphur and Antimony.

℞. Washed sulphur, two drachms.
Golden sulphuret of antimony,
Camphor, each, eight grains.
Sugar, two scruples.

Mix, and make a powder. *Hufeland.*

As a diaphoretic.

Sulphur Electuary.

℞. Sublimed sulphur, four ounces.
Cream of tartar, one ounce.
Syrup of orange-peel,
four fl. ounces.

Rub well together. Dose, two drachms as a laxative. *Brit. Ph.*

℞. Precipitated sulphur,
one drachm and a half.
Orange marmalade, half an ounce.
Pulp of tamarinds, two ounces.
Sugar, one ounce.

Mix. A tablespoonful three times a day, in hemorrhoids. *Radius.*

℞. Sulphur,
Burnt sponge, each, two drachms.
Prepared oyster-shell, one drachm.
Conserve of roses,
two ounces and a half.

Mix. A teaspoonful three or four times a day, as an alterative, in scrofulous affections. *Vogt.*

Compound Electuary of Sulphur.

℞. Washed sulphur,
one ounce and a half.
Confection of senna, two ounces.
Nitre, one drachm.
Syrup of orange-peel, sufficient.

Mix. One or two drachms once or twice a day, in hemorrhoidal affections. *Ellis.*

℞. Sublimed sulphur, half an ounce.
Cream of tartar,
one drachm and a half.
Confection of senna, one ounce.
Simple syrup, sufficient.

Mix, and make electuary. A teaspoonful at bedtime, for hemorrhoids. *Ainslie.*

℞. Sublimed sulphur, two ounces.
Cream of tartar, one ounce.
Powdered guaiacum, one drachm.
" rhubarb,
Spirit of nutmeg,
each, two drachms.
Honey, sufficient.

Mix, and make electuary. Known in England as *The Chelsea Pensioner*, and employed for the various forms of chronic rheumatism, in doses of one or two drachms, morning and evening.

Linctus with Sulphur.

℞. Washed sulphur, half a drachm.
Benzoic acid, fifteen grains.
Syrup of violets,
one ounce and a half.
Oxymel, one ounce.

Mix. A tablespoonful occasionally, as an expectorant. *Bories.*

Electuary of Sulphur.

℞. Washed sulphur, half an ounce.
Confection of senna,
one ounce and a half.
Syrup, sufficient.

Mix. A teaspoonful morning and evening, in hemorrhoids. *Lewis's Disp.*

Sulphur Mixture.

℞. Precipitated sulphur, two drachms.
Laudanum, twenty drops.
Water, four fl. ounces.

Mix. One spoonful three times a day, in mercurial disease. *Radius.*

℞. Precipitated sulphur, two drachms.
Fennel water, three fl. ounces.
Cinnamon water, one fl. ounce.
Syrup of opium, half a fl. ounce.

Mix. A spoonful every two hours, in diabetes mellitus. *Augustin.*

℞. Washed sulphur, one scruple.
Mucilage, seven drachms.
Sugar, half an ounce.
Rose water, one fl. drachm.

A teaspoonful every hour, in pectoral affections of young children. *Phœbus.*

Water of Sulphur.

℞. Flowers of sulphur, one ounce.
Water, two pints.

Shake occasionally for some hours, and pour off the clear liquid.
Amer. Journ. Ph. 1872, p. 6.

Recommended by J. L. Davis as a remedy for dandruff, the head to be saturated with it in the morning. Its effects may be probably due to traces of sulphurous and sulphuric acids.

Balsam of Sulphur.

℞. Washed sulphur, two ounces.
Olive oil, eight ounces.

Heat the oil, and gradually stir in the sulphur, till it assumes the consistence of a thick balsam. *Lond. Ph.* 1746.

Used as an external application to foul ulcers.

Sulphurated Linseed Oil.

℞. Sublimed sulphur, one part.
Linseed oil, six parts.

Mix, and boil with constant stirring, into a homogeneous mass. This is the balsam of sulphur of *Ph. Germ.*

Ethereal Balsam of Sulphur.

℞. Terebinthinated balsam of sulphur,
Sulphuric ether,
each, half a drachm.
Dippel's animal oil, six drachms.

Mix. In flatulent colic. *Augustin.*

Terebinthinated Balsam of Sulphur. (Sulphurated Oil of Turpentine.)

℞. Sulphur, one part.
Oil of turpentine, three parts.

Mix, digest, and decant the clear solution. *Ph. Germ.*

As an external application to ulcers, etc.

Ointment of Sulphur.

℞. Sublimed sulphur, one troyounce.
Lard, two troyounces.

Mix. This is also the formula of *Ph. Germ.*, and with the addition of five drachms of almond oil of *Paris Codex.* *U. S. Ph.*

℞. Sublimed sulphur, one ounce.
Benzoinated lard, four ounces.
Mix. *Brit. Ph.*
As an application in itch.

Compound Sulphur Ointment.

℞. Sulphur, one ounce.
Ammoniated mercury,
Benzoic acid, each, one drachm.
Oil of bergamot,
Sulphuric acid, each,
one fl. drachm.
Nitrate of potassium, two drachms.
Lard, half a pound.
Melt the lard, add the other ingredients, and stir till cold. *U. S. Ph.* 1850.
As an application in itch, tinea capitis, crusta lactea, etc.

℞. Sulphur, half a pound.
Powdered white helle-
bore, two ounces.
Nitrate of potassium, one drachm.
Soft soap, half a pound.
Lard, one pound and a half.
Oil of bergamot, thirty minims.
Mix. *Lond. Ph.* 1836.
Used as the last, but more irritating.

℞. Sulphur,
Oil of cade, each, three parts.
Lard,
Soft soap, each, eight parts.
Prepared chalk, two parts.
Mix. In itch. *Hebra.*

℞. Sulphur, two parts.
Carbonate of potassium, one part.
Lard, eight parts.
Mix. In itch. *Foy.*

℞. Sulphur, two ounces.
Powdered chloride of
ammonium, two drachms.
Oil of mint, one drachm.
Lard, four ounces.
Mix. In cases of inveterate itch.
Dewees.

℞. Washed sulphur, ten drachms.
Carbonate of potassium,
half an ounce.
Cinnabar, one ounce.
Oil of bergamot, half a fl. ounce.
Lard, ten ounces.
Mix. In itch. *Bateman.*

Ointment of Sulphur and Camphor.

℞. Washed sulphur, half a drachm.
Camphor, one scruple.
Rose ointment, one ounce.
Oil of roses, three drops.
Mix. As an application in psorophthalmia.
Allen.

Ointment of Sulphur and Soap.

℞. Sulphur, one part.
Soft soap, two parts.
Mix. In itch. *Radius.*

Ointment of Sulphur and Zinc.

℞. Washed sulphur,
Sulphate of zinc, each, one part.
Lard, eight parts.
Mix. In tinea capitis. *Ph. Germ.*

℞. Sulphur, four parts.
Oxide of zinc, three parts.
Oil of bayberries, six parts.
Lard, twelve parts.
Mix. As last. *Van Mons.*

Liniment of Sulphur and Soap.

℞. Soap, one ounce.
Water, three ounces.
Dissolve with a gentle heat, and add
Sulphur, one ounce.
Used as a lotion in itch. *Lugol.*

Cerate of Sulphur.

℞. Washed sulphur, two parts.
Galien's cerate, ten parts.
Oil of almonds, one part.
Mix. *Paris Codex.*

SULPHURIS CARBURETUM, VEL CARBONIS BI-SULPHIDUM.

BI-SULPHIDE OF CARBON.

℞. Sulphuret of iron, eleven parts.
Charcoal, three parts.
Mix, and introduce into a stone retort, furnished with a glass tube, dipping into water. Separate the sulphuret which collects at the bottom of the water in the recipient, and re-distil it from chloride of lime. *Van Mons.*

℞. Sulphur, at will.
Pass the vapor slowly through charcoal, heated to redness, in a porcelain tube, col-

lect the product in a receiver, and purify by another distillation. *Cottereau.*

This fluid is extremely volatile, and hence has been suggested as an anæsthetic agent. But thus far, experiments with it have not shown any superiority over other and safer liquids. In fact, they rather prove the reverse. It is used internally as a sudorific in rheumatism; dose, two or three drops. Also used externally.

Drops of Sulphuret of Carbon.

R. Sulphuret of carbon, one fl. drachm.
Alcohol, half a fl. ounce.

Mix. Four to six drops, every two hours, in rheumatism. *Wutzer.*

Mixture of Sulphuret of Carbon.

R. Sulphuret of carbon, one scruple.
Cow's milk, six fl. ounces.
Sugar, two drachms.

Mix. A tablespoonful four times a day, in hypertrophy of the stomach and contraction of the œsophagus. *Clarus.*

Liniment of Sulphuret of Carbon.

R. Sulphuret of carbon, half an ounce.
Oil of almonds, one ounce.

Mix. As an embrocation in gouty nodes. *Mansfield.*

R. Sulphuret of carbon, one drachm.
Camphorated oil, one ounce. *Beasley.*

R. Camphor, two drachms.
Dissolve in
Sulphuret of carbon, half a fl. ounce;
and add
Alcohol, one fl. ounce.

As an embrocation in rheumatism. *Lampadius.*

R. Sulphuret of carbon, two fl. drachms.
Camphorated ammon. liniment, two fl. ounces.

Mix. As an embrocation in rheumatism. *Wutzer.*

SULPHURIS IODIDUM.

IODIDE OF SULPHUR.

R. Iodine, four troyounces.
Sulphur, one troyounce.

Rub them together, in a porcelain or glass mortar. Put the mixture into a matrass, close the orifice slightly, and apply a gentle heat, so as to darken the mass, but not melt it. When uniformly dark, increase the fire so as to melt the iodine; then incline the vessel in different directions, to return to the mass any portions that have been condensed on the surface of the vessel; lastly, allow the matrass to cool, break it, and put the iodide into well-stopped bottles. *U. S. Ph.*

Used mostly as an external application, in cutaneous affections.

Powder of Iodide of Sulphur.

R. Powdered iodide of sulphur, ten grains.
Powdered gum Arabic, sufficient.

Mix, and divide into six powders. One, morning and evening, for an adult. Useful in porrigo, prurigo, impetigo, and tinea; also in noctural incontinence of urine. *Escolar.*

Ointment of Iodide of Sulphur.

R. Iodide of sulphur, thirty grains.
Lard, one troyounce.

Rub the iodide with a little of the lard, then add the remainder, and mix. *U. S. Ph.*

Brit. Ph. directs of lard one ounce.

R. Iodide of sulphur, five parts.
Lard, ninety-six parts.

Mix. *Foy.*

The strength is to be varied according to circumstances. Much used in chronic cutaneous diseases.

SUMBULUS.

SUMBUL.—MUSKROOT.

Said to be derived from *Sumbulus moschatus*, an umbelliferous plant of Bucharia. It occurs in round pieces of various dimensions, has a dark brown rough bark, a porous interior, a strong musk-like odor, and a sweetish, then bitter and balsamic taste. It is recommended in low typhoid fevers, and various nervous disorders, in doses of ten to twenty grains.

Tincture of Sumbul.

R. Sumbul, in coarse powder, two ounces and a half.
Proof spirit, sufficient.

Obtain, by maceration and displacement, twenty fl. ounces of tincture. Dose, ten to thirty minims. *Brit. Ph.*

Oleoresin of Sumbul.

℞. Powdered sumbul,
a convenient quantity.

Exhaust by ether; recover portion of it by distillation, and evaporate the remainder spontaneously. Dose, one to three grains.
Murawieff.

Recommended in hysteria, chronic bronchitis, pneumonia, and other diseases.

Fluid Extract of Sumbul.

℞. Powdered sumbul,
sixteen troyounces.

Exhaust with stronger alcohol by slow percolation, reserve the first fourteen fl. ounces, evaporate the remainder to two fl. ounces, and mix with reserved portion.

Compound Elixir of Sumbul.

℞. Tincture of sumbul,
Syrup, each, four fl. ounces.
Elixir of valerianate of ammonium, eight fl. ounces.
Compound tinture of cochineal, four fl. drachms.

Mix. Dose, a teaspoonful or more; to be shaken before use.
Amer. Phar. Assoc. 1873.

T.

TABACUM.

Tobacco.

Tobacco is the leaves of *Nicotiana tabacum*, an annual, herbaceous plant, a native of the warmer parts of America, and extensively cultivated in the United States and elsewhere. There are numerous varieties, but, in all of them, the leaves are the part that is used.

Sex. Syst. Pentand. monog. *Nat. Syst.* Solanaceæ.

Linn. Sp. Pl. 258. Griffith, Med. Bot. 493.

Tobacco, as found in commerce, consists of the dried leaves, which are packed in bundles; it has a narcotic, penetrating odor, and a bitterish, nauseous, acrid taste. It has the powers of a sedative narcotic, with those of an emetic and diuretic; it also acts as an errhine and sialagogue. In large doses it acts as a poison. It is employed to produce relaxation in spasmodic affections, as a diuretic, etc.

Compound Powder of Tobacco.

℞. Powdered tobacco,
" valerian, each,
two drachms.
Oil of lavender,
" marjoram, each,
three drops.

Mix. Used as a cephalic snuff. *Boeli.*

℞. Powdered tobacco, two grains.
Tartar emetic, one grain.
Powdered sugar, two drachms.
" gum Arabic,
half a drachm.

Mix, and form twenty powders. One, every two hours, in hooping-cough. *Petschaft.*

Extract of Tobacco.

℞. Cut tobacco, four ounces.
Water, two pints.

Boil, and let simmer for two or three hours, strain, and evaporate to consistence of an extract. For external use in neuralgia.
Chippendale.

Pills of Tobacco.

℞. Extract of tobacco, one drachm.
Liquorice, half an ounce.
Vinegar of squill, sufficient.

Mix, and make one hundred and eighty pills. Dose, one to three, in dropsy.
Van Mons.

Wine of Tobacco.

℞. Tobacco, in powder,
No. 50, one troyounce.
Sherry wine, one pint.

Macerate for seven days, express, and filter. *U. S. Ph.*

From ten to twenty minims, as a diuretic.

Tincture of Tobacco.

℞. Cut tobacco, one ounce.
Diluted alcohol, one pint.

Digest for three days, express, and filter. Dose, ten minims. *Augustin.*

Infusion of Tobacco.

℞ Tobacco, one drachm.
Boiling water, one pint.

Macerate for an hour in a covered vessel, and strain. *U. S. Ph.*

The enema of tobacco of *Brit. Ph.* is two-thirds the strength of this.

Used as an enema; one-half only should be used at a time; employed in strangulated hernia, obstinate colic, etc. Great caution must be used, as dangerous effects have followed its administration.

Mixture of Tobacco.

℞ Tobacco, one drachm.
Boiling water, two fl. ounces.

Infuse for twenty minutes, filter, and add

Alcohol, two fl. drachms.

Thirty to fifty drops, twice or thrice a day, in hydrothorax and dysuria. *Fowler.*

Lotion of Tobacco.

℞ Tobacco,
two drachms to half an ounce.
Boiling water, one pint.

Infuse. As a lotion in psora, but must be used with great caution. *Ellis.*

Cataplasm of Tobacco.

℞ Tobacco, one ounce.

Beat up with water, and form a cataplasm. To be applied to the throat in croup, and in spasm of the glottis, etc. *Ellis.*

Ointment of Tobacco.

℞ Tobacco, in fine
powder, half a troyounce.
Lard, eight troyounces.

By percolation with water obtain from the powder four fl. ounces of liquid, evaporate to a soft extract, and mix thoroughly with the lard. *U. S. Ph.*

In irritable ulcers, tinea capitis, etc. To be used with caution.

℞ Powdered tobacco,
Sulphur, each, four ounces.
Powdered white
hellebore, two ounces.
Oleander leaves, one ounce.
Common salt, ten drachms.
Rose ointment, two pounds.

Mix. As an application in psora, etc. *Taddei.*

℞ Extract of tobacco, one drachm.
Simple cerate, one ounce.

Mix. As a friction in neuralgia. *Chippendale.*

Oil of Tobacco.

℞ Tobacco, at will.

Introduce it into a retort of green glass connected with a receiver, which should be furnished with a tube, to conduct the incondensable gases to a chimney; heat the retort gradually to dull redness until the empyreumatic oil ceases to distil; separate the black tarry product from the acid liquor in the receiver, and preserve it for use. *U. S. Ph.*

Oleo-infusion of Tobacco.

℞ Bruised tobacco, one part.
Olive oil, two parts.

Digest until the moisture has evaporated, express, and filter. *Paris Codex.*

Nicotia.—Nicotina.

℞ Kentucky tobacco, at will.

Cut to pieces, and extract it with water; evaporate to an extract, exhaust this with alcohol; distil off the alcohol, treat the soft extract with an excess of potassa in water; agitate this with ether, in separate portions, till the impure nicotina is removed; unite the ethereal liquids, add an excess of pulverized oxalic acid, wash the oxalate of nicotina which precipitates with ether; then treat it with an aqueous solution of potassa, and again agitate the liquid with ether to remove the alkaloid, which is obtained by distilling off the ether in the form of a light brown, syrupy liquid, and consists of nicotina, ether, water, and some ammonia. The last three bodies may be removed by heating the nicotina in a retort to the temperature of 284° F. in a current of hydrogen, for twelve hours; then, by raising the heat to 356° F., the nicotina distils over pure. *Schloessing.*

Nicotina is too strong for internal administration.

TAMARINDUS.

Tamarinds.

Tamarinds are the preserved fruit of the *Tamarindus Indica*, a large tree, a native of the East Indies, and extensively cultivated in the tropical parts of America. Those brought here are principally derived from the West Indies.

Sex. Syst. Monadelph. triand. *Nat. Syst.* Fabaceæ.

Linn. Sp. Pl. 48. Griffith, Med. Bot. 262.

The preserved pods, as they come to us, are in a dark-colored, adhesive mass, formed of pulp, fragments of the pods, seeds, and syrup, of a sweet acidulous taste. They are cooling and laxative; and, when mixed with water, form a grateful drink in febrile diseases.

Pulp of Tamarinds.

℞ Tamarinds, at will.

Digest in an equal quantity of water, then pass through a sieve, evaporate to the thickness of an extract, and with every six parts of it, incorporate

Powdered sugar, one part.

Ph. Germ.

Electuary of Tamarinds.

℞ Pulp of tamarinds, one ounce and a half.
Cream of tartar, half an ounce.
Syrup of raspberries, sufficient.

Mix. Two teaspoonfuls morning and evening, as a laxative. *Radius.*

Infusion of Tamarinds.

℞ Pulp of tamarinds, one ounce.
Boiling water, two pints.

Infuse for one hour, and strain. As a cooling drink in fevers. *Cottereau.*

Tamarind Whey.

℞ Milk, two pints.
Tamarinds, two ounces.

Boil, and strain. As a cooling drink. *Pereira.*

TANACETUM.

Tansy.

Tansy, or *Tanacetum vulgare*, is a perennial herbaceous plant, with numerous yellow flowers; a native of Europe, and generally cultivated in our gardens, and has also become naturalized in some places.

Sex. Syst. Syngen. super. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1184. Griffith, Med. Bot. 406.

The leaves and flowering tops are officinal; they have a peculiar and strong odor, diminished by drying; and a warm, bitter, aromatic taste. It is an aromatic bitter, and has been praised in intermittents, hysteria, amenorrhœa, as an anthelmintic, etc. As a vermifuge, the seeds are to be preferred.

Compound Powder of Tansy.

℞ Tansy, Wormwood, Chamomile, Levant wormseed, each, equal parts.

Mix. *Paris Codex.*

A coarse powder is made, if it is to be used for preparing an infusion.

Infusion of Tansy.

℞ Fresh tansy, one ounce.
Boiling water, one pint.

Infuse and strain. Used internally, and as an injection against ascarides. *Niemann.*

Extract of Tansy.

℞ Tansy, one pound.
Alcohol, one pint.
Water, eight pints.

Digest for three days, express, distil off the alcohol, and evaporate to proper consistence. Dose, six to twenty grains. *Giordano.*

Oil of Tansy.

℞ Tansy, at will.
Water, sufficient

to cover. Distil, and separate the oil. *Guibourt.*

Dose, one to two drops, as a vermifuge.

Pills of Tansy.

℞ Oil of tansy, one fl. scruple.
Extract of English walnut, two drachms.
Powdered marsh mallow, sufficient.

Mix, and make sixty pills. Three to five every two hours, as a vermifuge. *Radius.*

Compound Tincture of Tansy.

℞ Tansy, one ounce.
Wormwood,
Rhubarb, each, three ounces.
Sherry wine, two fl. ounces.
Diluted alcohol, twenty fl. ounces.

Digest for eight days, and filter. Dose, one to two fl. drachms, two or three times a day, as a vermifuge. *Van Mons.*

TAPIOCA

Tapioca

Is a fecula obtained from the root of *Janipha manihot*, a shrub-like, herbaceous plant, a native of the tropical parts of

America, where it is largely cultivated under the name of Cassava, and forms an important article of food.

Sex. Syst. Monœc. monadelph. *Nat. Syst.* Euphorbiaceæ.

Kunth. ii. 85. Griffith, Med. Bot. 601.

Tapioca is found in the shops in the form of irregular, rough, white grains, having little odor or taste, swelling up in hot water, and affording a bland and nutritious diet for the sick and convalescent.

Tapioca Jelly.

℞ Tapioca, two tablespoonfuls.
Water, one pint.

Boil gently for an hour, or till it becomes gelatinous; flavor with sugar, wine, etc., according to circumstances *Ellis.*

Tapioca Pudding.

℞ Yolk of eggs, two.
Sugar, half an ounce.

Beat together, and stir the mixture with

Tapioca mucilage, one pint.

Bake in a slow oven. The mucilage should be made with milk, instead of water.

A. T. Thomson.

TARAXACUM.

Dandelion.

This officinal article is the root of *Taraxacum dens-leonis*, a small, herbaceous plant, with a perennial, fusiform root. It is a native of Europe, but has become naturalized in this country.

Sex. Syst. Syngen. æqual. *Nat. Syst.* Asteraceæ.

Haller, i. 23. Griffith, Med. Bot. 414.

The root is fusiform, of a light-brown color externally, succulent, inodorous, and of a mucilaginous, bitterish taste. It should be collected in autumn (*U. S. Ph.* and *Ph. Germ.*), between September and February (*Brit. Ph.*). It is aperient, diuretic, and somewhat tonic, and thought to be resolvent in engorgements of the liver.

Decoction of Dandelion.

℞ Bruised dandelion root, one ounce.
Water, sufficient.

Boil for ten minutes in sufficient water to obtain a pint (twenty fl. ounces). *Brit. Ph.*

A wineglassful two or three times a day, as a diuretic, etc.

Infusion of Dandelion.

℞ Bruised dandelion, two troyounces.
Boiling water, one pint.

Macerate for two hours in a covered vessel, and strain. *U. S. Ph.*

Dose, a wineglassful three times a day.

Compound Infusion of Dandelion.

℞ Infusion of dandelion, four fl. ounces.
Extract of dandelion, two drachms.
Carbonate of sodium, half a drachm.
Tartrate of potassium, three drachms.
Tincture of rhubarb, three fl. drachms.
" henbane, twenty drops.

Mix. One-third part three times a day, in dropsical and visceral affections.

Meigs.

Fluid Extract of Dandelion.

℞ Dandelion, in powder, No. 50, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Moisten the powder with four fl. ounces of the mixed liquids, pack in a percolator, add the remainder and macerate for four days; then, with diluted alcohol, displace twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with the reserved portion. *U. S. Ph.*

℞ Dandelion root, fresh, thirty-two ounces.

Slice it, and reduce to a pulp. Mix this with one-sixth its bulk of alcohol, macerate for twenty-four hours, and express strongly. Add a pint of water containing a little alcohol, and again express. Evaporate the mixed products to twelve fl. ounces, add four fl. ounces of alcohol, and filter.

A teaspoonful is equal to half a drachm of the extract obtained from the expressed juice. *W. Procter.*

Extract of Dandelion.

℞ Dandelion, gathered in September, five pounds.

Slice the dandelion; bruise it in a stone mortar, sprinkling on it a little water, until reduced to a pulp. Then express the juice, strain, and evaporate in a shallow dish over a water-bath, constantly stirring, to the proper consistence. *U. S. Ph.*

Brit. Ph. heats the juice to 212° for ten minutes, strains, and evaporates at or below 160°. *Paris Codex* evaporates the juice to one-third, cools, strains after twelve hours, and evaporates to the proper consistence. *Ph. Germ.* directs the entire plant, collected while flowering, and dried, to be exhausted with hot water, and the infusion properly evaporated.

Dose, a scruple to a drachm, three times a day, alone, or dissolved in cinnamon or mint water.

℞. Bruise the recent root, collected in September; add one-fourth its bulk of alcohol; allow the whole to macerate twelve hours, express powerfully, add a little diluted alcohol, and again express. Evaporate the mixed liquids in a water-bath to the proper consistence.

W. Procter.

Prepared Juice of Dandelion.

℞. Fresh dandelion root, seven pounds.
Alcohol, sufficient.

Bruise the root, express the juice, and to every three measures of it add one measure of rectified spirit. Keep in a cool place. Dose, one to two fl. drachms. *Brit. Ph.*

The *U. S. Ph.* adds one measure of alcohol to every five measures of the expressed juice.

Fluid Extract of Dandelion and Senna.

℞. Senna, two pounds.
Torrefied dandelion root, one pound.
German chamomile, quarter of a pound.
Sugar, twenty ounces.
Carbonate of potassium, or carbonate of sodium, one ounce.
Oil of wintergreen, half a drachm.
Alcohol, two ounces.
Water, half a gallon.

Powder the dry plants, and mix them with the water, holding the alkaline carbonate in solution. Let the mixture stand for twelve hours, then introduce into a percolator, and add water until a gallon of liquid shall have passed. Evaporate on a water-bath to twenty ounces, add the sugar, filter, and when cold add the alcohol, holding the oil of wintergreen in solution. Dose, a teaspoonful to a tablespoonful. *E. Dupuy.*

Pills of Extract of Dandelion.

℞. Extract of dandelion, half a drachm.
Powdered liquorice, sufficient.

Mix, and make eight pills. One, three times a day. In dropsy, and diseases of the urinary apparatus. *Ellis.*

℞. Extract of dandelion,
Soap, each, one ounce.
Liquid acetate of potassium, sufficient.

Mix, and make pills of four grains. Four to six in a day, as diuretic, etc. *St. Marie.*

Pills of Dandelion and Blue Mass.

℞. Extract of dandelion, half a drachm.
Blue pill, five to ten grains.
Powdered uva ursi, sufficient.

Mix, and make ten pills. One, thrice a day, in dropsy connected with liver disease. *Ellis.*

Mixture of Dandelion.

℞. Extract of dandelion, two ounces.
Peppermint water, six fl. ounces.
Clarified honey, one ounce.

Mix. Two spoonfuls every three hours. *Richter.*

℞. Extract of dandelion, two scruples.
Bicarbonate of sodium, twenty-four grains.
Tincture of rhubarb, one fl. drachm.
Infusion of colombo, eleven fl. drachms.
Caraway water, four fl. drachms.

Mix. Dose, a dessertspoonful twice daily, in infantile dyspepsia. *West.*

℞. Extract of dandelion, half a drachm.
Decoction of dandelion, nine fl. drachms.
Spirit of nitrous ether, one fl. drachm.
Syrup of ginger, two fl. drachms.

Mix. To be taken three times a day, as a diuretic, in anasarca and ascites. *Sprague.*

℞. Cream of tartar, two drachms.
Bruised cloves, two scruples.
Sugar, one ounce.
Decoction of dandelion, one pound.

Macerate for two hours, and strain. One-fourth to be given every six hours, in dropsy. *Sprague.*

Clyster of Dandelion.

℞. Dandelion root, bruised, three ounces.
Bran, one ounce.
Water, sixteen fl. ounces.

Boil down to eight fl. ounces; add, at close,
Chamomile,
Valerian, each, two drachms.

Strain; for two injections. Much praised in obstructions of the bowels. *Berends.*

TEREBINTHINA.

Turpentine.

Turpentine is the oleoresin of various species of the Pine tribe, and is also procured from trees of other orders. That used in the United States is obtained from several species of Pinus and Abies, but chiefly from the *P. palustris.*

Sex. Syst. Monœc. monadelph. *Nat. Syst.* Pinaceæ.

Willden. Sp. Pl. iv. 499. Griffith, Med. Bot. 604.

The officinal turpentine consists, essentially, of a volatile oil and a resin. All the turpentines are possessed of much the same properties; they have an aromatic odor, and a somewhat pungent and bitterish taste. They are stimulant, diuretic, anthelmintic, and, in large doses, purgative. They are also used externally as rubefacients.

Turpentine Pills.

℞. Turpentine, one drachm.

Divide into fifteen pills. One, four or five times a day, in affections of the urinary organs. *Ellis.*

Pills of Turpentine and Guaiacum.

℞. Powdered guaiacum, one drachm.
Venice turpentine, sufficient.

Mix, and make fifteen pills. One, thrice a day; in gleet and leucorrhœa. They sometimes cause strangury. *Ellis.*

Pills of Turpentine and Magnesia.

℞. Turpentine, ten drachms.
Calcined magnesia, seven drachms and a half.

Mix, and make into two hundred pills. In diseases of the urinary organs. *Paris Codex.*

Pills of Turpentine and Rhubarb.

℞. Turpentine, two ounces.
Extract of rhubarb, three drachms.
Camphor, two drachms.

Mix, and make pills of four grains. Dose, three, thrice a day, in leucorrhœa and gonorrhœa. *St. Marie.*

Pills of Turpentine and Myrrh.

℞. Turpentine,
Spermaceti, each, half an ounce.
Powdered myrrh, two drachms.
" olibanum, sufficient.

Mix, and make pills of three grains. One every three hours, in chronic catarrh. *Cadet.*

Pills of Turpentine and Jalap.

℞. Turpentine, one drachm.
Soap of jalap, half a drachm.
Extract of henbane, four grains.
Calomel, eight grains.

Make pills of three grains. Dose, four every three hours, for two days. As an anthelmintic. *Augustin.*

Electuary of Turpentine.

℞. Turpentine, Soap, Powdered rhubarb, each, one drachm.
Syrup, sufficient.

Mix. Three teaspoonfuls a day, in dropsy. *Radius.*

Turpentine Clyster.

℞. Venice turpentine, half a fl. ounce.
Yolk of egg, one.
Infusion of flaxseed, ten fl. ounces.
Rapeseed oil, one fl. ounce.

Mix. In colic and obstinate constipation. *Ph. Noscom. Ed.*

Liniment of Turpentine.

℞. Yellow wax, one part.

Melt, and add
Turpentine,
Oil of turpentine, each, one part.

Mix. Much praised in chronic ulcers on the legs. *Van Mons.*

℞. Yellow wax, half a pound.
Olive oil, one pound.
Red saunders, two ounces.
Turpentine, one pound.

Melt together, strain, and add

Camphor, two drachms.

As an application to contusions and ulcerations. *Van Mons.*

℞. Oil of turpentine,
Olive oil,
each, one ounce and a half.
Diluted sulphuric acid,
three drachms.

Mix. As an embrocation in rheumatism. *Chapman.*

Ointment of Turpentine.

℞. Turpentine,
Yellow wax,
Oil of turpentine, } equal parts.

Melt, mix, and stir until cool. *Ph. Germ.*

Compound Ointment of Turpentine.

℞. Turpentine, four drachms.
Yolk of egg, two drachms.
Olive oil, one drachm.

Beat together into a uniform mass. *Paris Codex.*

This is the *digestif simple* of the French; the formula of *Ph. Germ.* directs for the above quantities, in addition, eight grains each of powdered myrrh and aloes.

℞. Mucilage, one pound.
Fresh butter, two pounds.
Olive oil, three pounds and a half.

Melt together, and add

Turpentine, three ounces.

Mix well. As an application in engorgement of the breasts, in nephritic pains, etc. *Swediaur.*

Turpentine Plaster.

℞. Turpentine, one ounce.
White of egg,
Wheat flour,
Sugar, } each,
Honey, } one ounce.
Brandy,
Olive oil,

Mix the turpentine and honey, gradually adding the other ingredients, and rub well. As an application to painful ulcers. *St. Marie.*

Compound Turpentine Plaster.

℞. Turpentine, eight parts.
Suet, twenty-four parts.
Yellow wax, thirty-two parts.
Essence of mint,
" cloves, each, one part.
Oil of mace, six parts.
Powdered benzoin, eight parts.
" olibanum, sixteen parts.

Mix, with the assistance of heat. Useful in diarrhœa, dyspepsia, flatulence, and colic. *Ph. Suea.*

Terebinthinate Syrup.

℞. White turpentine, one troyounce.
Tincture of tolu, half a fl. ounce.
Carbonate of magnesium,
four drachms.

Triturate well together, add gradually six fl. ounces of water, filter, and add

Glycerin, two fl. ounces.
Gum Arabic, two troyounces.
Sugar, twenty troyounces.

Dissolve, and add water to make twenty-four fl. ounces. *Maryland Coll. Ph.*

Turpentine Mixture.

℞. Turpentine, two drachms.
Yolk of egg, one.

Rub together, and add

Extract of rhubarb,
Sal prunelle, each, one drachm.

Then add gradually

Infusion of liquorice, ten fl. ozs.
Syrup of marsh mallow,
one fl. ounce.

Mix. A tablespoonful every hour, in gonorrhœa. *Bories.*

℞. Turpentine, one ounce.
Mint water, four fl. ounces.
Gum Arabic, sufficient.
Simple syrup, one ounce.
Extract of belladonna, one grain.

Mix, and make emulsion. Used in gonorrhœa after the reduction of the inflammatory stage; when it acts too powerfully on the bowels, it must be intermitted for a few days. *Ebriart.*

TESTA PRÆPARATA.

PREPARED OYSTER-SHELL.

(*See page* 183.)

TILIA EUROPÆA.

LINDEN.

The linden is a handsome tree, a native of the north of Europe, and much cultivated in the United States for ornament and shade.

Sex. Syst. Polyand. monog. *Nat. Syst.* Tiliaceæ.

Linn. Sp. Pl. 733. Lindley, Flor. Med. 147.

The part used is the flowers, which, when dried, have a faint but agreeable odor, and a sweetish, mucilaginous taste. They are antispasmodic and diaphoretic, and are much used in Europe. It is probable that the flowers of our native species have the same properties.

Water of Linden Flowers.

℞. Linden flowers, one part.
Distil with sufficient
Water, ten parts.

On adding to this product one-fiftieth of its weight of alcohol, and distilling afterwards one part, the concentrated linden-flower water is obtained, which keeps better.
Ph. Germ.

Infusion of Linden Flowers.

℞. Linden flowers, two drachms.
Boiling water, two pints.

Infuse for half an hour, and strain. A mild antispasmodic. *Paris Codex.*

Compound Infusion of Linden Flowers.

℞. Linden flowers, Chamomile flowers, Orange leaves, each, two drachms.
Boiling water, two pints.

Infuse for half an hour, strain, and add
Syrup, two fl. ounces.

A small cupful, occasionally, as an antispasmodic. *Foy.*

TORMENTILLA.

Tormentil.

The root of *Potentilla tormentilla*, a small, perennial plant, with a large, woody, dark-brown root, a native of many parts of Europe, growing in barren spots.

Sex. Syst. Icosand. polygyn. *Nat. Syst.* Rosaceæ.

Sibthorp, Fl. Ox. 162. Griffith, Med. Bot. 278.

The root, when dried, is in irregular pieces, which are knotty, tuberculated, and of a dark, reddish-brown color. Its odor is slightly aromatic, and its taste very astringent. It is a simple and somewhat active astringent. Dose, thirty grains to a drachm.

Compound Powder of Tormentil.

℞. Powdered tormentil,
" gum Arabic,
each, three ounces.
Armenian bole, six ounces.
Powdered cinnamon, four ounces.
" long pepper, half an ounce.

Mix. *Geneva Ph.*

Extract of Tormentil.

℞. Tormentil, one part.
Water, eight parts.

Boil, and strain; repeat with same quantity of water, mix the two decoctions, strain, and evaporate to the proper consistence.

Dose, from twenty to thirty grains.
Amst. Ph.

Decoction of Tormentil.

℞. Tormentil, bruised, two ounces.
Distilled water, one pint and a half.

Boil down to a pint, and strain.
Lond. Ph. 1836.

Dose, one to two fl. ounces, three or four times a day.

Gargle of Tormentil.

℞. Tormentil, one ounce.
Water, twelve fl. ounces.

Boil down one-third, strain, and add
Alum, one drachm.
Honey, one ounce.

Mix. *Radius.*

TOXICODENDRON.

Poison Oak.

The leaves of *Rhus toxicodendron*, a shrubby plant, a native of the United States, are the parts used. This plant sometimes becomes a vine, whence it has received the name of *Rhus radicans*, or Poison vine. Both varieties grow in woods, along fence rows, etc., and are extremely poisonous to some persons, whilst other individuals are not affected by them; the acrid poisonous principle producing these effects is a volatile acid, named toxicodendric acid.

Sex. Syst. Pentand. trigyn. *Nat. Syst.* Anacardiaceæ.

Linn. Sp. Pl. 381. Griffith, Med. Bot. 184.

The leaves are inodorous, and of a disagreeable, acrid taste. They are narcotic and stimulant, acting like the acro-narcotic poisons in large doses. They have been used with success in obstinate cutaneous affections, chronic rheumatism, etc. The dose is half a grain, gradually increased.

Extract of Poison Oak.

℞. Leaves of poison oak, one part.
Alcohol, four parts.

Infuse, strain, distil off the spirit, and evaporate to proper consistence.

Paris Codex.

Dose, one grain, gradually increased till some effect is induced.

Pills of Poison Oak.

℞ Extract of poison oak,
Camphor, each, fifteen grains.
Extract of arnica,
" valerian,
each, thirty grains.
Powdered calamus, sufficient.

Beat into mass, and make thirty pills. One, three times a day, in hemiplegia.

Brera.

Tincture of Poison Oak.

℞ Fresh leaves of
poison oak, five parts.
Alcohol, six parts.

Bruise the leaves in a stone mortar, macerate with the spirit for eight days, express, and filter. Dose, five to fifteen grains.

Ph. Germ.

TRAGACANTHA.

Tragacanth.

A gummy exudation from *Astragalus verus*, and other species of *Astragalus*. All of them are small shrubs, with thorny petioles, found in the countries bordering on the Levant, in Persia, etc.

Sex. Syst. Diadelph. decand. *Nat. Syst.* Fabaceæ.

Lindley, Flor. Med. 247. Griffith, Med. Bot. 239.

Tragacanth is in contorted, vermicular pieces, rounded or flattened, of a whitish or whitish-yellow color; semi-translucent and corneous; tough, except when quite dry. It is inodorous, and of a bland, mucilaginous taste. It swells up and forms a paste or mixture with water, but does not dissolve. It is demulcent and nutritive.

Compound Tragacanth Powder.

℞ Powdered tragacanth, } each, one
" gum Arabic, } each, one
" starch, } each, one ounce.
Sugar, powdered, three ounces.

Mix well. *Brit. Ph.*

Demulcent. Dose, from thirty grains to a drachm.

Mucilage of Tragacanth.

℞ Tragacanth, one troyounce.
Boiling water, one pint.

Macerate for twenty-four hours, occasionally stirring, triturate till uniform, and strain forcibly through linen. *U. S. Ph.*

Brit. Ph. directs sixty grains of tragacanth to ten ounces of distilled water; *Paris Codex*, one part of the gum to nine parts of cold water.

Principally used as a basis for more active medicines.

Paste of Tragacanth.

℞ Tragacanth, thirty-two parts.
Macerate in
Water, one thousand parts.
Also, dissolve
Isinglass, forty-eight parts,
in
Water, eight hundred parts.

Strain through a linen cloth, and mix with the macerated gum; then add

Syrup, one thousand parts.

Evaporate by a gentle fire to the consistence of a soft paste, and gradually add

Orange-flower water,
sixty-four parts.

Evaporate to proper consistence on a water-bath. As an expectorant. *Foy.*

℞ White tragacanth,
sixty-four parts.
Isinglass, ninety-six parts.
Water, three thousand parts.
Simple syrup, two thousand parts.
Orange-flower water, one hundred and twenty-eight parts.

Bruise the tragacanth, place it in a vessel for two days with five-sixths of the water, dissolve the isinglass in the rest of the water, and strain both solutions; heat the syrup to boiling, and mix the whole, and continue heat till the mixture is of the consistence of soft paste, stirring well. Remove from fire, add orange-flower water, and evaporate on water-bath till sufficiently firm; pour on marble slab, and divide into lozenges. *Mouchon.*

TRIOSTEUM.

Fever-Root.

The root of *T. perfoliatum* is placed on the secondary list of the U. S. Pharmacopœia.

Sex. Syst. Pentand. monog. *Nat. Syst.* Caprifoliaceæ.

Linn. Sp. Pl. 395. Griffith, Med. Bot. 352.

Fever-root or fever-wort is found in most parts of the United States. The root is of a yellowish or brownish color externally, and

it has a nauseous odor and a bitter taste. It is a mild cathartic, in doses of ten to fifteen grains.

Extract of Fever-Root.

℞. Powdered fever-root, one pound.
Diluted alcohol, four pints.

Moisten the powder with half a pint of the diluted alcohol, macerate for twenty-four hours, transfer to a percolator, and add gradually the remainder of the alcohol. Add water until the tincture passes tasteless. Then distil off the alcohol, and evaporate to the consistence of an extract. *Thomas.*

Dose, five to eight grains.

TRITICUM REPENS.

COUCHGRASS.—DOG'S GRASS.

This plant is found in Europe and in this country. The rhizome, which is the officinal part, is long, of the thickness of straw, and has a sweet taste. It is collected in the spring.

Sex. Syst. Triand. Digyn. *Nat. Syst.* Graminaceæ.

It is employed as a diuretic and mild aperient. Dose in decoction, one to two drachms.

Extract of Couchgrass.

℞. Couchgrass root, one part.

Digest with six parts of hot water, strain, and evaporate to a syrup. Dissolve this in four times its weight of cold water, filter, and evaporate to a soft extract. Dose, half an ounce or more daily. *Ph. Germ.*

Liquid Extract of Couchgrass.

℞. Extract of couchgrass, three parts.
Distilled water, one part.

Dissolve. *Pruss. Ph.* 1846.

TUSSILAGO.

COLTSFOOT.

Coltsfoot is a small, perennial plant, with large, radical, cordate leaves, and flowers on simple, leafless scapes. It is the *Tussilago farfara*, and is a native both of Europe and North America.

Sex. Syst. Syngen. super. *Nat. Syst.* Asteraceæ.

Linn. Sp. Pl. 1214. Griffith, Med. Bot. 393.

The whole herb is used, but the leaves and flowers should be preferred. The latter have an agreeable smell; the former are inodorous, but have a rough, bitterish, mucilaginous taste. Both are demulcent, and have been much used in pectoral affections.

Decoction of Coltsfoot.

℞. Flowers of coltsfoot, one ounce.
Water, two pints.

Boil down to a pint, and strain. *Beasley.*

Dose, a wineglassful.

Compound Decoction of Coltsfoot.

℞. Flowers of coltsfoot, six ounces.
Figs, Raisins, Jujubes, each, two ounces.
Water, twelve pints.

Boil down one-third, adding

Liquorice root, two ounces.

Strain. As a demulcent drink. *Taddei.*

Syrup of Coltsfoot.

℞. Flowers of coltsfoot, one ounce.
Boiling water, ten ounces.

Macerate for six hours, express, strain, and add

Sugar, nineteen ounces.

Make syrup. *Paris Codex.*

U.

ULMUS CAMPESTRIS.

ELM BARK.

This is a large tree, a native of Europe, having strong, spreading branches, and a rough, cracked bark.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Ulmaceæ.

Linn. Sp. Pl. 327. Lindley, Flor. Med. 307.

The part used is the inner bark; this is thin, tough, of a brownish-yellow color, inodorous, of a mucilaginous, slightly astringent taste. It is demulcent, and somewhat astringent, and also acts as an alterative.

Decoction of Elm Bark.

℞. Elm bark, cut in small pieces, two ounces and a half.

Distilled water, twenty ounces.

Boil for ten minutes, and strain. *Brit. Ph.*

From four to six fl. ounces, two or three times a day, in cutaneous affections.

Compound Infusion of Elm Bark.

℞. Elm bark, Burdock root, Dock root, Bittersweet, Fumitory, each, two drachms.
Boiling water, one pint.

Infuse for four hours, strain, and add

Syrup of sarsaparilla, one fl. ounce.

To be taken in twenty-four hours, in divided doses, in chronic cutaneous diseases. *Cadet.*

Compound Decoction of Elm Bark.

℞. Elm bark, two and a half ounces.
Liquorice root, Sassafras, Guaiacum chips, each, one drachm.
Mezereon, twenty grains.
Water, sufficient

to obtain twenty fl. ounces. *Jeffrey.*

ULMUS FULVA.

Slippery Elm.

A very lofty tree, found in the United States, especially west of the mountains, growing in dry, elevated situations.

Sex. Syst. Pentand. digyn. *Nat. Syst.* Ulmaceæ.

Mich. N. Am. Sylv. iii. 89.

The inner bark is the part used. This is in long, flat strips, of a tawny color on the outer surface, and reddish on the inner, of a peculiar, though feeble odor, and a mucilaginous taste. It is a good demulcent, and is much used in diseases of the mucous membranes. It is also very nutritious.

Mucilage of Slippery Elm Bark.

℞. Slippery elm bark, sliced, one troyounce.
Boiling water, one pint,

Macerate for two hours, and strain. *U. S. Ph.*

To be used freely as a demulcent.

Cataplasm of Slippery Elm Bark.

℞. Ground slippery elm bark, at will.
Hot water, sufficient.

Make a cataplasm. A soothing application to irritable ulcers, etc.

UVA URSI.

Uva Ursi.—Bearberry.

Uva Ursi is the leaves of *Arctostaphylos uva ursi*, a small, evergreen shrub, inhabiting the northern parts of both continents, and the high mountains in more southern latitudes.

Sex. Syst. Decand. monog. *Nat. Syst.* Ericaceæ.

Sprengel, ii. 287. Griffith, Med. Bot. 425.

The leaves, when dried, have a somewhat hay-like smell; their taste is astringent and bitterish. They are astringent and tonic, with some special action on the urinary organs. They are much used in diseases of the genito-urinary organs. Dose, in powder, from a scruple to a drachm, three or four times a day.

Compound Powder of Uva Ursi.

℞. Powdered uva ursi,
" Peruvian bark, each, two drachms.
" opium, three grains.

Mix, and divide into six powders. One, twice a day, with lime water, in nephritic complaints, and as an antilithic. *Ferriar.*

℞. Powdered uva ursi, one drachm and a half.
Bicarbonate of sodium, one drachm.

Mix, and divide into twelve powders. One, thrice a day, in diseases of the kidney and bladder. *Ellis.*

℞. Powdered uva ursi, half an ounce.
" gum Arabic, two drachms.
" jalap, one drachm.
" sugar, half an ounce.
Oil of orange-peel, six drops.

Mix. Dose, one drachm, in nephritic colic. *Quarin.*

Decoction of Uva Ursi.

℞. Uva Ursi, one troyounce.
Water, sufficient.

Boil for fifteen minutes so as to obtain one pint, and strain. *U. S. Ph.*

Brit. Ph. directs an *infusion of uva ursi* made with half an ounce of uva ursi and ten ounces of boiling water.

Dose, from one to two fl. ounces, three or four times a day.

Extract of Uva Ursi.

℞. Uva ursi, two pounds and a half.
Boiling water, two gallons.

Macerate for twenty-four hours, boil down

to a gallon, strain while hot, and evaporate to a proper consistence. *Lond. Ph.*

Dose, five to thirty grains.

Mixture of Uva Ursi.

℞ Uva ursi, one ounce and a half.
Milfoil, one ounce.
Water, three pints.

Boil down to two pints, and add, at close,

Liquorice, one ounce.

Strain, and add

Syrup of cinnamon, two ounces.

To be taken in divided doses, in passive hemorrhages of lungs and bladder. *Radius.*

Syrup of Uva Ursi.

℞ Uva ursi, eight ounces.
Boiling water, two pints.

Infuse the finely-bruised leaves in the water for three hours, put in a displacement filter, and add water sufficient to obtain two pints of infusion. Evaporate to one pint, and add two pounds (av.) of sugar, and make syrup. *W. Procter.*

Fluid Extract of Uva Ursi.

℞ Uva ursi, in powder,
No. 50, sixteen troyounces.
Glycerin, three fl. ounces.
Water, five fl. ounces.
Alcohol, eight fl. ounces.

Moisten the powder with half a pint of the mixed liquids, pack in a glass percolator, add the remaining mixture, and macerate for four days; then, with diluted alcohol, displace twenty-four fl. ounces, reserving the first fourteen, add to the remainder one fl. ounce of glycerin, evaporate to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, a teaspoonful.

V.

VALERIANA.

Valerian.

Several species of Valerian are used in medicine, but the only one officinal is the *Valeriana officinalis*, a handsome, perennial, herbaceous plant, with white or rose-colored flowers, in terminal corymbs.

Sex. Syst. Triand. monog. *Nat. Syst.* Valerianaceæ.

Linn. Sp. Pl. 45. Griffith, Med. Bot. 384.

The part used is the root; this consists of many long, slender fibres, arising from a tuberculated rhizome; the color is yellowish or brownish; the odor is strong and peculiar, and the taste is bitter and aromatic. It is an active antispasmodic, and is much used in nervous diseases. The dose is from half a drachm to a drachm, two or three times a day.

Compound Powder of Valerian.

℞ Powdered valerian, one drachm.
" orange leaves, one scruple.
Chloride of ammonium, two grains.
Oil of cajeput, four drops.

Mix. A tablespoonful four times a day, in hot tea. In epilepsy. *Niemann.*

℞ Powdered valerian, one ounce.
Oxide of zinc, one scruple.
Musk, ten grains.

Mix. As an antispasmodic, in teaspoonful doses. *Brera.*

℞ Powdered valerian, one scruple.
Aromatic powder, ten grains.

Mix. To be taken three or four times a day. In hysteria, hemicrania, chlorosis, etc. *A. T. Thomson.*

Bolus of Valerian and Iron.

℞ Powdered valerian, one drachm.
Carbonate of iron, ten grains.
Mucilage of gum Arabic, sufficient.

Mix, and make bolus. One, three times a day, as antispasmodic. *Ellis.*

Bolus of Valerian and Sulphate of Potassium.

℞ Powdered valerian,
two drachms and a half.
Sulphate of potassium,
eighteen grains.
Syrup of orange-peel, sufficient.

Mix, and make eighteen boluses. *Cadet.*

Compound Pills of Valerian.

℞. Powdered valerian, half a drachm.
Castor,
Oxide of zinc, each, one scruple.

Mix, and make eighteen pills. Three, thrice a day. *Dupuytren.*

Electuary of Valerian.

℞. Powdered valerian,
" orange leaves,
each, six drachms.
Syrup of wormwood, sufficient.

Mix. Two or three teaspoonfuls a day. *Swediaur.*

℞. Powdered valerian, two ounces.
" Peruvian bark,
half an ounce.
Carbonate of ammonium,
two drachms.
Ginger syrup, sufficient.

Mix. Dose, a drachm every hour or two, in periodic hemicrania. *Donald Monro.*

Distilled Water of Valerian.

℞. Valerian, bruised, one part.

Distil with sufficient water, until ten parts have been obtained. *Ph. Germ.*

Infusion of Valerian.

℞. Valerian, bruised,
half a troyounce.
Boiling water, one pint.

Macerate for two hours in a covered vessel, and strain. *U. S. Ph.*

This may also be prepared by displacing the valerian in powder No. 40 with water. The infusion of *Brit. Ph.* represents twelve grains of valerian in each fl. ounce. *Paris Codex* directs one part of valerian to one hundred parts of boiling water. Dose, two fl. ounces, three or four times a day.

Compound Infusion of Valerian.

℞. Valerian, one ounce and a half.
Decoction of Peruvian bark,
two pints.

Make an infusion, strain, and add

Syrup of chamomile,
one fl. ounce and a half.
Camphor, twenty grains.

Mix. One to two fl. ounces, three times a day. *Saunders.*

Tincture of Valerian.

℞. Valerian, in powder,
No. 50, four troyounces.
Diluted alcohol, sufficient.

Obtain by displacement two pints. *U. S. Ph.*

Tincture of valerian of *Brit. Ph.* is of very nearly the same strength; that of *Paris Codex* is made by displacing five parts of tincture from one part of valerian with 60 per cent. alcohol; that of *Ph. Germ.* corresponds with the latter.

Dose, from one to four fl. drachms.

Ethereal Tincture of Valerian.

℞. Coarsely-powdered
valerian, one part.
Spirit of ether, five parts.

Macerate for eight days, and filter. Dose, thirty to sixty drops. *Ph. Germ.*

Ammoniated Tincture of Valerian.

℞. Valerian, in powder,
No. 50, four troyounces.
Aromatic spirit of ammonia,
two pints.

Macerate for fourteen days, express, and filter. This may also be made by displacement. *U. S. Ph.*

Dose, one to two fl. drachms, in milk, or some mucilaginous fluid.

Ammoniated Tincture of Valerian and Castor.

℞. Ammoniated tincture of valerian,
Tincture of castor,
each, two fl. drachms.
Camphor water, six fl. ounces.

Mix. A tablespoonful, in muscæ volitantes. *Ware.*

Compound Ammoniated Tincture of Valerian.

℞. Valerian, one ounce.
Cloves,
Mace, each, one drachm.
Lemon-peel,
one drachm and a half.
Aromatic spirit of ammonia,
twenty-four fl. ounces.

Macerate for a week, express, and filter. Dose, a half to one fl. drachm. *Van Mons.*

Compound Tincture of Valerian.

℞ Valerian,
Castor, each, two ounces.
Saffron, one ounce.
Peppermint water,
Alcohol, each, twenty fl. ounces.

Macerate for a week, express, and filter. Dose, a half to one fl. drachm. *Wirt. Ph.*

Wine of Valerian.

℞ Valerian, three ounces.
Alcohol, 60 pr. ct., six ounces.

Macerate for twenty-four hours, and add

Good white wine,
one hundred ounces.

Macerate for ten days, express, and filter. A spoonful, as may be required.
Paris Codex.

Syrup of Valerian.

℞ Bruised valerian, ten ounces.
Boiling water, sixty ounces.

Make an infusion with forty ounces of the water, express, and filter; treat the residue with the remainder of the water, express and filter enough to obtain with the first portion, forty-three ounces; to this add

Distilled valerian water,
ten ounces.
Sugar, one hundred ounces.

Dissolve in a covered vessel, by means of a water-bath. *Paris Codex.*

Mixture of Valerian and Ammonia.

℞ Powdered valerian, one scruple.
Carbonate of ammonium,
ten grains.
Cinnamon water, two fl. ounces.

Mix. As a draught, every fourth hour, in nervous headache, etc. *Ellis.*

Mixture of Valerian and Hoffmann's Anodyne.

℞ Valerian, six drachms.
Boiling water, eight fl. ounces.

Make an infusion, strain, and add

Cinnamon water, two fl. ounces.
Hoffmann's anodyne,
two fl. drachms.
Syrup, one fl. ounce.

Mix. A spoonful, as required. *Foy.*

Tincture of Valerian and Hoffmann's Anodyne.

℞ Tincture of valerian,
Hoffmann's anodyne,
each, one fl. ounce.

Mix. A teaspoonful, as may be required.
Ellis.

℞ Tincture of valerian,
Hoffmann's anodyne,
each, half a fl. drachm.
Tincture of hyoscyamus,
twenty minims.
Camphor water, ten fl. drachms.

Mix. In hysteria. *Ashwell.*

Oil of Valerian.

℞ Bruised valerian, at will.
Water, sufficient.

Distil, and separate the oil from the product. Dose, three to five drops.

Mixture of Oil of Valerian and Ammonia.

℞ Oil of valerian, eight drops.
Aromatic spirit of
ammonia, one fl. drachm.
Water, four fl. ounces.
Sugar, two drachms.

Mix. A tablespoonful every two or three hours. *Ellis.*

Extract of Valerian.

℞ Valerian, in powder,
No. 60, twelve troyounces.
Alcohol, one pint.
Diluted alcohol, sufficient.

Obtain by displacement, using the alcohol and afterwards diluted alcohol, three pints of tincture, evaporate the first pint spontaneously to three fl. ounces, and the remaining two pints by means of a water-bath to a syrupy consistence; mix the two liquids, and evaporate at or below 120° to an extract. *U. S. Ph.*

Ph. Germ. directs to exhaust with diluted alcohol, and *Paris Codex* with 60 pr. ct. alcohol.

Fluid Extract of Valerian.

℞ Valerian, in powder,
No. 60, sixteen troyounces.
Stronger alcohol, sufficient.

Moisten the powder with five fl. ounces of the alcohol, pack firmly in a percolator, add eleven fl. ounces of stronger alcohol, and

macerate for four days; then displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with the reserved portion. Dose, thirty minims. *U. S. Ph.*

VANILLA.

Vanilla.

Under this name are included the seed pods of several species of *Vanilla*, but that most generally known is the *V. aromatica*, a climbing plant, a native of Mexico and South America.

Sex. Syst. Gynand. monand. *Nat. Syst.* Orchidaceæ.

Swartz, Occident, iii. 1518. Flore Medicale, vi. 345.

The part used is the pod; this is long, slender, cylindrical, compressed, of a blackish-brown color, formed of two valves, and filled with a brown pulp, containing a great quantity of small, blackish, shining seeds. The odor is peculiar but pleasant, the taste aromatic, hot, and pungent. It is principally used in this country for flavoring purposes, but is esteemed by European writers as an aromatic stimulant, increasing the power of the muscular system, and exciting the sexual feelings. It has been given in hysteria, rheumatism, impotence, etc. The dose is from eight to twelve grains.

Vanilla Sugar.

℞. Vanilla, one part.
Sugar, nine parts.

Triturate together until a uniform powder is obtained. *Ph. Germ.*

Vanilla Lozenges.

℞. Vanilla, one ounce.
Sugar, seven ounces.
Gum tragacanth, half a drachm.
Water, half an ounce.

Mix, and make lozenges of twelve grains. *Béral.*

Tincture of Vanilla.

℞. Vanilla, one part.
Alcohol, sp. gr. 0.892, five parts.

Macerate for eight days, express, and filter. Dose, forty drops. *Ph. Germ.*

The tincture of *Paris Codex* is one-half this strength.

Spirit of Vanilla.

℞. Vanilla, one part.
Alcohol,
Water, each, twelve parts.

Mix, and distil twelve parts. *Soubeiran.*

Vanilla Arrowroot.

℞. Milk, fifteen ounces.
Sugar,
Vanilla sugar, } each, one ounce.
Arrowroot,

Mix, and boil, constantly stirring. *Béral.*

Vanilla Milk.

℞. Milk, sixteen ounces.
Vanilla sugar, half an ounce.

Dissolve, and strain. *Béral.*

Essence of Vanilla.

℞. Vanilla, nine ounces.
Spirit of abelmoschus (ambrette), two pints.
Cloves, thirty grains.
Musk, seven grains.

Used as a perfume, and for flavoring. *Cooley.*

Fluid Extract of Vanilla.

℞. Vanilla, one ounce.
Sugar, three ounces.
Syrup,
Water, each, half a pint.
Deodorized alcohol, one fl. ounce.

Cut the vanilla in thin, transverse slices, triturate it with the sugar, till reduced to a moderately-fine powder, add the syrup with two ounces of the water, put the mixture into a strong pint-bottle, cork, and tie it over; place it in a vessel of water, which is then to be heated to the boiling point, and kept there for half an hour; remove the cork, and strain. The residue is then to be mixed with the remainder of the water and the alcohol, the mixture returned to the bottle, and heated as before, strained, and mixed with the first product. *W. Procter.*

VERATRIA.

Veratria.

℞. Cevadilla, in powder, No. 50, twenty-four troyounces.
Alcohol, three gallons.
Sulphuric acid,
Water of ammonia,
Purified animal charcoal, } each, sufficient.
Magnesia,

Digest the cevadilla in a gallon of the alcohol, in a retort with a receiver attached, for four hours, and pour off the liquor. To the residue, add another gallon of alcohol,

together with the distilled portion, digest for an hour, and pour off the liquor; repeat a third time. Express, mix, and strain the liquors, and distil off the alcohol on a water-bath. Boil the residue three or four times in water acidulated with sulphuric acid, mix and strain the liquors, and evaporate to the consistence of syrup. Add magnesia in slight excess, shake frequently, express, and wash residue. Repeat expression and washing two or three times. Dry the residue, digest it with gentle heat several times in alcohol, straining after each digestion. Distil off alcohol from the mixed liquors, boil the residue for fifteen minutes in water, with a little sulphuric acid and purified animal charcoal, and strain. Thoroughly wash the residue, mix the washings with the strained liquor, evaporate gently to consistence of syrup, add as much solution of ammonia as will precipitate the veratria, separate this, and dry it. *U. S. Ph.*

Veratria is a violent and active poison. It is given internally in minute doses, but is more generally used externally, in gout, rheumatism, nervous affections, etc. The dose is from one-twelfth to one-sixth of a grain.

Pills of Veratria.

℞ Veratria, half a grain.
Syrup of gum,
Powdered gum Arabic, each,
sufficient.

Mix, and make six pills. Dose, one, to be increased to three. *Magendie.*

Pills of Veratria and Henbane.

℞ Veratria, one grain.
Extract of henbane,
Powdered liquorice, each,
twelve grains.

Mix, and make twelve pills. One, thrice a day. *Turnbull.*

Tincture of Veratria.

℞ Veratria, four grains.
Alcohol, one fl. ounce.

Dissolve. Dose, from ten to twenty drops in a wineglassful of water, in dropsy, gout, rheumatism, etc. *Magendie.*

Lotion of Veratria.

℞ Veratria,
one scruple to one drachm.
Alcohol, two fl. ounces.

Mix. As an embrocation; to be used with caution. *Turnbull.*

Glycerite of Veratria.

℞ Veratria, twenty grains.
Alcohol, six fl. drachms.
Glycerin, two fl. drachms.

Dissolve, and mix. *Waring.*

Liniment of Veratria.

℞ Veratria, eight grains.
Alcohol,
Soap liniment, each,
four fl. drachms.

Mix well. *Brande.*

Compound Veratria Liniment.

℞ Veratria, five grains.
Tincture of aconite root,
four fl. drachms.
Chloroform, ninety minims.
Camphorated soap liniment,
twelve fl. drachms.

Mix. Used under the name of *Buckler's neuralgia liniment. Maryland Coll. Ph.*

Ointment of Veratria.

℞ Veratria, twenty grains.
Lard, one troyounce.

Rub the veratria with the lard gradually added, and mix thoroughly. *U. S. Ph.*

℞ Veratria, eight grains.
Prepared lard, one ounce.
Olive oil, half a fl. drachm.

Rub the veratria and oil together, then mix thoroughly with the lard. *Brit. Ph.*

A piece about the size of a hazelnut to be rubbed for five or fifteen minutes over the seat of the disease, in rheumatism, etc.

℞ Veratria, one scruple.
Rub with
Olive oil, one drachm.
Add
Spermaceti ointment,
seven drachms.

Mix. As the last. *Turnbull.*

Ointment of Veratria and Opium.

℞ Veratria, half a drachm.
Powdered opium, one drachm.
Lard, one ounce and a half.

Mix. As a friction, in rheumatism.
Dunglison.

Ointment of Veratria and Morphia.

℞. Veratria,
Sulphate of morphia,
each, ten grains.
Lard, one ounce.

Mix. To be rubbed into the perineum thrice daily, in incontinence of urine of adults. *Kennard.*

Ointment of Veratria and Iodine.

℞. Veratria, one scruple.
Iodide of potassium,
half a drachm.
Lard, one ounce.

Mix. *Jourdan.*

VERATRIÆ MURIAS.

Muriate of Veratria.

℞. Veratria, at will.
Muriatic acid, sufficient

to saturate; filter, evaporate, and crystallize. *Giordano.*

VERATRIÆ NITRAS.

Nitrate of Veratria.

VERATRIÆ SULPHAS.

Sulphate of Veratria.

Are made in the same manner, using the appropriate acids. Dose of each, about one-eighth of a grain.

Solution of Sulphate of Veratria.

℞. Sulphate of veratria, one grain.
Distilled water, two fl. ounces.

Dissolve. Dose, one to two fl. drachms, in a mixture, as a substitute for the wine of colchicum or the *Eau médicinale.*
Cadet.

VERATRUM ALBUM.

White Hellebore.

A perennial, herbaceous plant, with a fleshy, fusiform rhizome, having numerous fibres. It is a native of the mountainous parts of Europe.

Sex. Syst. Polygam. monœc. *Nat. Syst.* Melanthaceæ.

Linn. Sp. Pl. 1479. Griffith, Med. Bot. 643.

The rhizome, which is the officinal part, is in cylindrical, somewhat conical pieces, with numerous radicles; these are corrugated, and of a blackish-brown color. Their odor is slight, and their taste at first sweetish, and then bitter and acrid. White hellebore is an active irritant, causing violent vomiting and purging. Externally, it acts like the other powerful acrids. Internally, in small doses, it has been used in many diseases; but it is now principally employed externally in the treatment of cutaneous affections, etc. Dose, from a grain to two grains, gradually increased.

Powder of White Hellebore.

℞. Powdered white hellebore,
three grains.
" starch, one scruple.

Mix. As an errhine in amaurosis and lethargic affections. *Radius.*

Cephalic Snuff.
(Schneeberger.)

℞. White hellebore, one ounce.
Orris root,
Bayberry bark,
each, half an ounce.
Starch, six ounces.
Oil of cloves, ten drops.

Mix the fine powders thoroughly.
Maryland Coll. Ph.

Decoction of White Hellebore.

℞. White hellebore, ten drachms.
Distilled water, two pints.

Boil down to a pint, and add

Rectified spirit, three fl. ounces,

and strain. *Lond. Ph.* 1836.

As a wash, in cutaneous diseases.

Wine of White Hellebore.

℞. Bruised white hellebore,
four ounces.
Wine, one pint.

Macerate for fourteen days, express, and filter. *U. S. Ph.* 1850.

Dose, ten minims, gradually increased, two or three times a day, in gout and rheumatism.

Tincture of White Hellebore.

℞. Bruised white hellebore,
four ounces.
Alcohol (80 per ct.),
twenty ounces.

Macerate for ten days, express, and filter.
Paris Codex.

Dose, the same as of the wine, and in same cases.

Ointment of White Hellebore.

℞ Powdered white hellebore, two ounces.
Lard, eight ounces.
Oil of lemon, twenty minims.
Mix. *U. S. Ph.* 1850.

As a friction in itch, etc. To be used with caution on children.

Compound Ointment of White Hellebore.

℞ Powdered white hellebore, two ounces.
" nitre, one drachm.
Soft soap,
Sulphur, each, six ounces.
Lard, one pound and a half.
Mix. As a friction in itch. *Phœbus.*

VERATRUM VIRIDE.

American or Green Hellebore.

A tall, perennial plant, with a thick, fleshy rhizome, having a tunicated top, and numerous fibrous radicles. It is a native of the United States, growing in damp meadows and wet situations.

Sex. Syst. Polygam. monœc. *Nat. Syst.* Melanthaceæ.

Aiton, Hort. Kev. iii. 422. Griffith, Med. Bot. 643.

The root, in a fresh state, has an unpleasant odor, which disappears on drying. Its taste is bitter and acrid. Its properties are similar to those of the white hellebore, but it does not purge, and rapidly reduces the frequency and force of the pulse. Dose, one grain, gradually increasing.

Tincture of American Hellebore.

℞ Green hellebore, in coarse powder, four ounces.
Rectified spirit, sufficient.

Obtain by maceration and displacement one pint (twenty fl. ounces). Dose, five to twenty minims. *Brit. Ph.*

The tincture of *Ph. Germ.* is of nearly the same strength.

℞ American hellebore, in powder, No. 50, sixteen troyounces.
Alcohol, sufficient.

Obtain by percolation two pints. *U. S. Ph.*

Dose, for an adult, eight drops, every three hours. Each dose to be increased one or two drops, until nausea, vomiting, or a reduction of the frequency of the pulse takes place; then to be reduced to one-half in all cases. *Norwood.*

Wine of American Hellebore.

℞ American hellebore, bruised, six ounces.
White wine, fourteen fl. ounces.
Diluted alcohol, two ounces.

Macerate for fourteen days, express, and filter. Dose, as of tincture. *Osgood.*

The recent root should be used in the two preparations of Dr. Osgood.

Fluid Extract of American Hellebore.

℞ American hellebore, in powder, No. 60, sixteen troyounces.
Stronger alcohol, sufficient.

Moisten the powder with five fl. ounces of the alcohol, pack firmly in a percolator, add eleven fl. ounces of stronger alcohol, and macerate for four days; then displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with reserved portion. *U. S. Ph.*

Dose, two to five drops.

Extract of American Hellebore.

℞ Fresh root of American hellebore, at will.

Bruise well, express the juice, and evaporate to proper consistence, by a gentle heat, or by exposure to the sun. Dose, from a fourth to half a grain. *Osgood.*

Ointment of American Hellebore.

℞ Powdered extract of American hellebore, one drachm.
Simple cerate, one ounce.
Oil of lemon, three minims.
Mix. *Osgood.*

Pills of American Hellebore.

℞ Extract of American hellebore, ten grains.
Opium, five grains.
Soap, fifteen grains.
Mucilage of gum Arabic, sufficient.

Mix, and make thirty pills. One, every three or four hours, in rheumatism, etc. *Osgood.*

℞ Extract of American hellebore, twelve grains.
Calomel, six grains.

Mix, and make six pills, one every two or three hours, carefully watching its effects, in pericarditis. *Waring—Curran.*

Mixture of American Hellebore.

℞. Tincture of American hellebore, one part.
" bloodroot,
Camphorated tincture of opium, each, two parts.

Mix. Dose, thirty to sixty minims, in catarrh. *Osgood.*

VIOLA.

Violet.

Two species of violet, viz., *V. pedata* and *V. odorata*, are sometimes used in medicine. The former is indigenous to this country, and is officinal in the *U. S. Ph.* The latter is a small, perennial plant, with fragrant, blue flowers, a native of Europe, but generally cultivated in our gardens.

Sex. Syst. Pentand. monog. *Nat. Syst.* Violaceæ.

Linn. Sp. Pl. 1324. Griffith, Med. Bot. 140.

The flowers of both species are of a blue color, almost inodorous when dried, and of a slightly bitter taste. They are principally used as a demulcent, and as a laxative for infants. The rhizome contains an alkaloid similar in its properties to emetia.

Conserve of Violets.

℞. Violet flowers, fresh, one part.
Sugar, three parts.

Rub together. *Soubeiran.*

Syrup of Violets.

℞. Fresh violet petals, one hundred parts.

Wash with lukewarm water; then infuse for twelve hours in a tin vessel with

Boiling water, sufficient

to obtain 212 parts of clear infusion, in which dissolve 400 parts of sugar. *Paris Codex.*

A gentle laxative for infants, in doses of one to two fl. drachms.

Honey of Violets.

℞. Expressed juice of violets,
Honey, equal parts.

Evaporate to a proper consistence. *Soubeiran.*

Oil of Violets.

℞. Fresh violet flowers, fifteen ounces.
Almond oil, five pounds.

Infuse, with three equal quantities of the flowers, and strain. Used as an article of perfumery. *Taddei.*

℞. Powdered orris root, at will.

Exhaust with ether, distil to about one-fourth, mix with almond oil, and evaporate the ether spontaneously. *Dorvault.*

W.

WINTERA.

Winter's Bark.

This is derived from an evergreen tree, found in the southern parts of South America, the *Drimys Winteri*, and also from other species, growing in Peru, etc.

Sex. Syst. Polyand. tetragyn. *Nat. Syst.* Magnoliaceæ.

Forster, Gen. 84. Griffith, Med. Bot. 100.

The bark is in quilled pieces of some length; of a pale, yellowish, or dull, reddish gray, with darker spots externally, and of a dark cinnamon internally. It has an aromatic odor, and a warm, spicy taste. It is a stimulating aromatic tonic. The dose, in powder, is about half a drachm.

Tincture of Winter's Bark.

℞. Bruised Winter's bark, one part.
Diluted alcohol, eight parts.

Digest with one-half of the alcohol, and repeat with the other. Unite the two tinctures, and filter.

X.

XANTHORRHIZA.

Yellow-Root.

The root of *Xanthorrhiza apiifolia*, a plant indigenous to the United States, is occasionally employed in medicine.

Sex. Syst. Pentand. polyg. *Nat. Syst.* Ranunculaceæ.

Willd. Sp. Pl. i. 1568. Griffith, Med. Bot. 96.

The root and bark of this little shrub are possessed of tonic properties, and may be used in cases where the pure bitters are indicated.

Infusion of Yellow-Root.

℞. Bruised yellow-root, one ounce.
Boiling water, one pint.

Macerate in a covered vessel for two hours, and strain. Dose, as a tonic, one fl. ounce. *Thomas.*

Extract of Yellow-Root.

℞. Coarsely-powdered yellow-root, eight ounces.
Diluted alcohol, two pints.

Moisten the powder with six fl. ounces of diluted alcohol, and macerate twenty-four hours; then transfer to a percolator, and add gradually the rest of the diluted alcohol. When this has passed, continue the percolation with water until the powder is exhausted. Distil off the alcohol, and evaporate to the consistence of an extract. *Thomas.*

Dose, five grains.

XANTHOXYLUM.

Prickly-Ash.

The bark of *Xanthoxylum fraxineum*, a shrub about ten feet high, growing in the Middle and Western States, is recognized in the *U. S. Ph.*

Sex. Syst. Dicec. pentand. *Nat. Syst.* Xanthoxylaceæ.

The bark is possessed of stimulant and irritant properties. It is more used in domestic than in regular practice.

Decoction of Prickly-Ash.

℞. Contused bark of prickly-ash, one ounce.
Water, three pints.

Boil down to a quart.

One pint to be taken, in divided doses, during the twenty-four hours, in chronic rheumatism. *G. B. Wood.*

Z.

ZINCUM.

Zinc.

ZINCI ACETAS.

Acetate of Zinc.

℞. Commercial oxide of zinc, four troyounces.
Acetic acid, seventeen fl. ounces.
Distilled water, ten fl. ounces.

Digest the oxide in the mixed liquids for half an hour, heat to boiling, filter while hot, and crystallize. Acidulate mother liquor with acetic acid, evaporate to one-half, and again crystallize. Drain and dry the crystals. *U. S. Ph.*

Used as an external application.

Collyrium of Acetate of Zinc.

℞. Sulphate of zinc,
Acetate of lead, each, six grains.
Rose water, four fl. ounces.

Mix, and filter. *Ellis.*

℞. Acetate of zinc, fifteen to thirty grains.
Distilled water, twelve fl. ounces.

Dissolve. *Ware.*

℞. Sulphate of zinc, one drachm.
Acetate of lead, half a drachm.
Camphor, one scruple.
Rose water, twelve fl. ounces.

Mix, and filter the solution. *Spielmann.*

Injection of Acetate of Zinc.

℞. Acetate of zinc, eight grains.
Rose water, four fl. ounces.

Dissolve. In gonorrhœa. *Ellis.*

Injection of Acetate of Zinc and Lead.

℞. Sulphate of zinc, six grains.
Solution of subacetate of lead, thirty minims.
Water, four fl. ounces.

Mix. By double decomposition acetate of zinc and some sulphate of lead are formed. *A. Cooper.*

Lotion of Acetate of Zinc.

℞. Acetate of zinc, four scruples.
Distilled vinegar, sixteen fl. ounces.

Dissolve. *Béral.*

Tincture of Acetate of Zinc.

℞. Sulphate of zinc,
Acetate of potassium, each, one part.

Rub together, and add

Diluted alcohol, sixteen parts.

Macerate for a week, stirring occasionally, and filter. *Dub. Ph.* 1826.

As a collyrium and injection, properly diluted.

ZINCI CARBONAS.

Carbonate of Zinc.

Precipitated Carbonate of Zinc.

℞. Sulphate of zinc,
Carbonate of sodium, each, twelve troyounces.
Boiling water, one gallon.

Dissolve the salts separately in four pints of water, and mix the solutions; wash the precipitated carbonate, first by decantation, and afterwards on a filter; then press, and dry it. *U. S. Ph.*

Cerate of Carbonate of Zinc.

℞. Precipitated carbonate of zinc, two troyounces.
Simple ointment, ten troyounces.

Mix them. *U. S. Ph.*

Much used as a dressing to excoriations, shallow ulcerations, etc.

Plaster of Carbonate of Zinc.

℞. Simple plaster,
Powdered carbonate of zinc, each, two pounds.
Yellow wax, five ounces.
Suet,
Turpentine, each, one ounce and a half.

Melt, and mix thoroughly. *Van Mons.*

℞. Carbonate of zinc,
White lead, each, one ounce and a half.
Yellow wax, four ounces.
Olive oil, six ounces.

Melt the wax with the oil, and add the two powders, stirring well. To diminish a superabundant suppuration in ulcers. *Cadet.*

ZINCI CHLORIDUM.

Solution of Chloride of Zinc.

℞. Zinc, in small pieces, six troyounces.
Nitric acid,
Precipitated carbonate of zinc, each, two drachms and a half.
Muriatic acid, sufficient.

Add the zinc and muriatic acid together, in a glass vessel, and dissolve; strain, add the nitric acid, and evaporate to dryness. Dissolve in five fl. ounces of distilled water, add the carbonate, let rest for twenty-four hours, filter, and add sufficient distilled water to make a pint. *U. S. Ph.*

The solution of *Brit. Ph.* is very nearly of the same strength.

Chloride of Zinc.

℞. Evaporate a convenient quantity of solution of chloride of zinc to dryness, fuse, pour on a flat stone, and when it has congealed break the mass in pieces. *U. S. Ph.*

Brit. Ph. requires the chloride of zinc to be moulded.

℞. Solution of chloride of barium, at will.
Solution of sulphate of zinc, sufficient

to precipitate sulphate of barium. Filter, and evaporate the fluid to obtain crystals of chloride of zinc. *Righini.*

Principally used externally, as a caustic and stimulant; also given internally, in very small doses, in the neuroses, etc.

CHLORIDE OF ZINC.
(*Disinfectant.*)

℞ Granulated zinc, four pounds (av.).
Muriatic acid,
four pounds, or sufficient.
Water, two gallons two pints.

Add the acid gradually to the zinc, in a glass or porcelain vessel, till it is dissolved, taking care there is no excess of acid; strain through a coarse cloth, and add the water. This contains one part of the chloride in twelve, and is of the strength of a disinfectant. *E. Parrish.*

Ethereal Tincture of Chloride of Zinc.

℞ Chloride of zinc, four drachms.
Alcohol, one fl. ounce.
Ether, two fl. ounces.

Mix. Five drops every four hours, in a little sugar and water, gradually increasing the dose, in chorea, epilepsy, etc.
Hufeland.

Lotion of Chloride of Zinc.

℞ Chloride of zinc, eight grains.
Aloes, two scruples.
Distilled water, four fl. ounces.

Mix. As an application to atonic and foul ulcers. *Vogt.*

Injection of Chloride of Zinc.

℞ Liquid chloride of zinc,
twenty-four drops.
Water, four fl. ounces.

Mix, and filter. A small quantity to be injected a short distance into the urethra, two or three times a day, in gleet.
Gaudriot.

Vaginal Suppository of Chloride of Zinc.

℞ Liquid chloride of zinc, five drops.
Sulphate of morphia, half a grain.

Mix with three drachms of the following paste:—

Mucilage of tragacanth, six parts.
White sugar, three parts.
Starch, nine parts.

Make a suppository. To be used every day, or every other day. *Gaudriot.*

Canquoin's Paste of Chloride of Zinc.

No. 1.

℞ Chloride of zinc, one part.
Wheat flour, or sulphate
of calcium, four parts.
Water, sufficient
to make a paste. Mix.

No. 2.

℞ Chloride of zinc, one part.
Wheat flour, three parts.
Water, sufficient.
Mix.

No. 3.

℞ Chloride of zinc, one part.
Wheat flour, two parts.
Water, sufficient.
Mix.

The chloride and flour are to be carefully and quickly mixed; add the water to half the quantity, so as to form a soft paste, and mix with this the rest of the powder. Form into cakes of half a line to four lines in thickness. To remain on twenty-four hours or more (six to ten are often sufficient). To produce an eschar in cancer, lupus, etc.
Canquoin.

℞ Chloride of zinc, one part.
Chloride of antimony, half a part.
Flour, two and a half parts.
Water, sufficient.

To be mixed as above, so as to be moulded into any desired form. As a caustic, in nodulated cancerous tumors. *Canquoin.*

Powdered opium may be added to any of the above, to mitigate the pain.

ZINCI CYANIDUM.

CYANIDE OF ZINC.

℞ Sulphate of zinc, one part.
Distilled water, ten parts.
Dissolve; add
Solution of pure cyanide
of potassium, sufficient

to form precipitate, being added by drops. Filter, wash the precipitate, and dry.
Paris Codex.

Used in spasmodic affections, etc., in doses of a twelfth to a half of a grain.

Powder of Cyanide of Zinc.

℞ Cyanide of zinc, two grains.
Magnesia, twenty grains.
Powdered cinnamon, nine grains.

Mix, and divide into six powders. One, every four hours, in nervous affections, etc.
Guibourt.

These are *Henning's antispasmodic powders.*

Pills of Cyanide of Zinc.

℞. Cyanide of zinc, fifteen grains.
Extract of liquorice, two drachms.

Mix, and make sixty pills. One, three times a day. *Kopp.*

ZINCI FERROCYANIDUM.

FERROCYANIDE OF ZINC.

℞. Ferrocyanide of potassium, six parts.
Sulphate of zinc, eight parts.

Dissolve separately in warm water, add the solutions together; collect the precipitate, wash it well, and dry. *Ph. Germ.*

Given in doses of one grain, twice or thrice a day, gradually increasing the quantity, in nervous affections, nocturnal pains, etc.

Powder of Ferrocyanide of Zinc.

℞. Ferrocyanide of zinc, six grains.
Magnesia, four grains.
Powdered cinnamon, three grains.

Mix. Every four hours, in nervous affections, cramp of the stomach, etc. *Radius.*

The quantity of the salt of zinc is rather large, but it is thus ordered in various authors.

Compound Pills of Ferrocyanide of Zinc.

℞. Ferrocyanide of zinc, fifteen grains.
Powdered valerian, half a drachm.
Extract of valerian, sufficient.

Mix, and make sixty pills. Two, morning and evening, in chorea. *Rosenstiel.*

℞. Ferrocyanide of zinc, ten grains.
Magnesia, two scruples.
Oil of valerian, twenty drops.
Syrup of chamomile, five scruples.
Powdered valerian, ten scruples.

Mix, and make into three-grain pills. Six, three times a day, gradually increasing. *Vogt.*

Solution of Ferrocyanide of Zinc.

℞. Ferrocyanide of zinc, four grains.
Distilled water, two fl. ounces.

Mix. Dose, a tablespoonful, four times a day, in chorea. *Radius.*

Mixture of Ferrocyanide of Zinc.

℞. Ferrocyanide of zinc, eight to twenty grains.
Powdered gum Arabic, two drachms.
Cherry water, three fl. ounces.
Wine of opium, one fl. scruple.
Cherry-laurel water, half a fl. ounce.

Mix. As a collyrium, in scrofulous and rheumatic ophthalmia. *Ammon.*

ZINCI IODIDUM.

IODIDE OF ZINC.

℞. Iodine, one hundred and seventy parts.
Powdered zinc, twenty parts.

Heat in a matrass till the iodide sublimes. *Magendie.*

℞. Iodine, two parts.
Powdered zinc, one part.

Digest in a little water, and agitate till the solution is colorless. Evaporate with a gentle heat. *Beasley.*

Used externally.

Ointment of Iodide of Zinc.

℞. Iodide of zinc, one drachm.
Lard, one ounce.

Mix. As a friction to tumors, etc. *Ure.*

Collyrium of Iodide of Zinc.

℞. Iodide of zinc, four grains.
Distilled water, six fl. ounces.

Dissolve.

Solution of Iodide of Zinc.

℞. Iodide of zinc, ten to thirty grains.
Distilled water, one fl. ounce.

Dissolve. To be applied, by means of a sponge tied to a quill, to enlarged tonsils; to be followed, after some days' perseverance, by a saturated solution applied by a camel's hair brush. *T. Ross.*

Concentrated Solution of Iodide of Zinc.

℞. Iodine, four drachms.
Granulated zinc, one drachm.
Water, fifteen drachms.

Digest until colorless, and filter. *Dorvault.*

Syrup of Iodide of Zinc.

℞. Iodine, four drachms.
Powdered zinc, two drachms.
Water, four fl. ounces.

Agitate till colorless; then filter into
Syrup, twelve fl. ounces.
Mix. *A. T. Thomson.*

℞. Iodine, twelve drachms two scruples.
Finely granulated zinc, one ounce.
Sugar, one pound (avoir.).
Water, nine fl. ounces.

Add the zinc and iodine to the water in an evaporating dish, and heat gently until the solution becomes colorless. Place the sugar in a wide-mouthed bottle, filter the hot solution into it, and add sufficient water to make a pint of syrup. Dissolve the sugar by a gentle heat.

Each fl. ounce contains one drachm of iodide of zinc. *A. B. Taylor.*

℞. Concentrated solution of iodide of zinc, one part.
Simple syrup, ninety-nine parts.
Mix. *Deschamps.*

ZINCI LACTAS.

Lactate of Zinc.

℞. Lactic acid, a convenient quantity.

Neutralize with recently precipitated oxide or carbonate of zinc, and crystallize. *Paris Codex.*

℞. Sulphate of zinc, nine parts.
Lactate of calcium, ten parts.

Mix, boil with some water, cool, filter, and crystallize. *Dorvault.*

This salt requires sixty parts of cold, and six of boiling water for solution. Recommended by Herpin in epilepsy. Dose, two grains, thrice daily, in the form of pill, and gradually increased to three grains.

ZINCI NITRAS.

Nitrate of Zinc.

℞. Granulated zinc, at will.
Nitric acid, sufficient.

Dilute the acid with an equal bulk of water, dissolve the zinc, heat until a slight precipitate of oxynitrate is formed, dilute with its bulk of boiling water, cool, and filter; then evaporate at a gentle heat until it congeals on cooling; break into pieces, and drain. *Lefort.*

Paste of Nitrate of Zinc.

℞. Nitrate of zinc, ten parts.
Water,
Wheaten flower, each, five parts.

Dissolve the nitrate in the water, and gradually add the flour. *Lefort.*

Recommended by Clement and Desgrange as a serviceable caustic, remaining soft, without contracting or spreading at the edges.

ZINCI OXIDUM.

Oxide of Zinc.

℞. Precipitated carbonate of zinc, one pound.

Expose to a low red heat in a shallow vessel, so as to drive off the carbonic acid. *U. S. Ph.*

Tonic and antispasmodic, and given in nervous and spasmodic affections, in doses of two to ten grains and upwards, several times a day. Also used externally.

Powder of Oxide of Zinc.

℞. Oxide of zinc, three grains.
White sugar, five grains.

Mix. One powder every four hours. Useful in gastric or spasmodic cough. *A. T. Thomson.*

Compound Powder of Oxide of Zinc.

℞. Oxide of zinc, six grains.
Extract of henbane, one grain.
Oil of valerian, one drop.
Powdered valerian, half a drachm.

Mix, and divide into nine powders. One, thrice a day, in nervous disorders. *Radius.*

℞. Oxide of zinc, one drachm.
Powdered opium, ten grains.
" Peruvian bark,
" fennel, each, one ounce.

Mix, and divide into fifty powders. One, every two hours, in hooping-cough. *Augustin.*

Powder of Oxide of Zinc and Colombo.

℞. Oxide of zinc, four grains.
Powdered colombo, thirty grains.

Mix, and divide into four powders. One every three hours, in dyspepsia. *Brera.*

Pills of Oxide of Zinc.

℞. Oxide of zinc, two scruples.
Conserve of roses, sufficient.

Mix, and make ten pills. One, three or four times a day, in epilepsy, chorea, nervous headache, etc. *Ellis.*

Compound Pills of Oxide of Zinc.

℞. Oxide of zinc, five grains.
Extract of cascarilla, six grains.
Syrup of ginger, sufficient.

Mix, and make three pills; one to be taken three times a day, in epilepsy. *Ainslie.*

℞. Oxide of zinc, one scruple.
Powdered valerian, thirty grains.
Castor, four grains.
Syrup, sufficient.

Mix, and make twelve pills. To be taken during the day, in epilepsy, etc. *Foy.*

℞. Oxide of zinc,
Extract of hyoscyamus,
each, two scruples.

Mix, and make forty pills. Dose, two pills, increased to twenty or thirty during the day; in facial neuralgia. *Niemeyer.*

Lotion with Oxide of Zinc.

℞. Oxide of zinc, one ounce.
Elder-flower water,
one fl. ounce and a half.

Agitate together. In pustular erysipelas. *Augustin.*

Ointment of Oxide of Zinc.

℞. Oxide of zinc, eighty grains.
Ointment of benzoin,
four hundred grains.

Mix. *U. S. Ph.*

The proportions of oxide of zinc and benzoinated lard are 1 : 5 *U. S. Ph.*, 2 : 11 *Brit. Ph.*, 1 : 9 *Paris Codex.* The *Ph. Germ.* directs one part of the oxide to nine parts of ointment of rose-water.

A mild, astringent application, in chronic ophthalmia, and in excoriation and ulceration.

Ointment of Impure Oxide of Zinc. (Tutty Ointment.)

℞. Prepared tutty, one drachm.
Lard, five drachms.

Rub together. *Pereira.*

Ointment of Oxide of Zinc and Opium.

℞. Oxide of zinc, half a drachm.
Fresh butter, one drachm.
Powdered opium, one grain.

Mix. In chronic ophthalmia. *Hencke.*

Ointment of Oxide of Zinc and Calomel.

℞. Oxide of zinc, half a drachm.
Calomel,
Powdered aloes, each, one grain.
Fresh butter, two drachms.

Mix. In scrofulous ophthalmia. *Scarpa.*

Cerate of Oxide of Zinc and Lycopodium.

℞. Oxide of zinc,
Lycopodium, each, fifteen grains.
Simple cerate, half an ounce.

Mix. In ulceration of the breasts, tetter, etc. *Hufeland.*

Dusting Powder of Oxide of Zinc.

℞. Oxide of zinc,
Lycopodium, each, equal parts.

Mix. Used in erythema of infants, accompanied by moisture. *J. L. Smith.*

℞. Oxide of zinc, one part.
Powdered acacia, two parts.

Mix. Applied to sore and fissured nipples. *Waring.*

ZINCI SULPHAS.

Sulphate of Zinc.

℞. Zinc, in small pieces, four ounces.
Sulphuric acid, six ounces.
Distilled water, four pints.

Introduce the zinc and water into a glass vessel, and add the sulphuric acid by degrees; when all effervescence has ceased, filter, boil to a pellicle, and set aside to crystallize. *U. S. Ph.*

It is astringent, tonic, and, in large doses, a prompt and effective emetic. Dose, as a tonic, one to two grains; as emetic, ten to thirty.

Pills of Sulphate of Zinc.

℞. Sulphate of zinc, ten grains.
Conserve of roses, sufficient.

Mix, and make twenty pills. One, three times a day. In hooping-cough, etc. *Ellis.*

Pills of Sulphate of Zinc and Turpentine.

℞. Sulphate of zinc, two drachms.
Venice turpentine, sufficient.
Mix, and make sixty pills. As a tonic.
Beasley.

Pills of Sulphate of Zinc and Myrrh.

℞. Sulphate of zinc, ten grains.
Powdered myrrh,
one drachm and a half.
Conserve of roses, sufficient.
Mix, and make twenty pills. From two to four pills a day, in hooping-cough. *Paris.*

Compound Pills of Sulphate of Zinc.

℞. Sulphate of zinc, one grain.
Extract of gentian, eight grains.
Syrup of ginger, sufficient.
Mix, and make two pills, to be taken during the day, with two fl. drachms of infusion of chamomile, in epilepsy. *Ainslie.*

Solution of Sulphate of Zinc.

℞. Sulphate of zinc, two grains.
Chamomile water, three fl. ounces.
Dissolve. A spoonful, two or three times a day, in chronic dysentery. *Radius.*

Alkaline Solution of Zinc.

℞. Sulphate of zinc,
twenty-four grains.
Solution of potassa,
three drachms.
Dissolve. Dose, thirty drops in water twice daily. A useful adjunct to other treatment in acne punctata.
A. T. Thomson.

Collyrium of Sulphate of Zinc.

℞. Sulphate of zinc, one grain.
Rose water, five hundred grains.
Dissolve. *Paris Codex.*

℞. Sulphate of zinc, six grains.
Acetate of lead, ten grains.
Laudanum, one fl. drachm.
Water, five fl. ounces.
Mix. As an application to the eyes in ophthalmia, after reduction of the inflammation. *Gregory.*

℞. Sulphate of zinc, six grains.
Mucilage of quince seed,
one fl. ounce.
Distilled water, six fl. ounces.
Spirit of camphor, five drops.
Mix, and strain. *Scarpa.*
To be used as the last.

℞. Sulphate of zinc, } each,
Crystallized sugar, } each,
Orris root, } each, one grain.
Rose water, eleven fl. drachms.
Macerate, and filter. *Dorvault.*
A popular remedy in France, where it is used under various names.

Collyrium of Sulphate of Zinc and Camphor.

℞. Sulphate of zinc, one scruple.
Camphor water,
Rose water, each, eight fl. ounces.
Mix. *Ainslie.*

Fomentation with Sulphate of Zinc.

℞. Sulphate of zinc,
one drachm and a half.
Decoction of pomegranate
bark, four pints.
" Peruvian bark,
two pints.
Laudanum, one fl. ounce.
Mix. As an application to external piles, and in vaginal gonorrhœa. *Brera.*

White Caustic Lotion.

℞. Sulphate of zinc,
Acetate of lead, each, ninety grains.
Nitrate of silver, ten grains.
Corrosive sublimate, five grains.
Water, six fl. ounces.
Mix. *Maryland Coll. Ph.*

Gargle of Sulphate of Zinc.

℞. Sulphate of zinc, one drachm.
Honey, half a fl. ounce.
Tincture of myrrh,
Brandy, each, one fl. ounce.
Rose water, six fl. ounces.
Mix. In ulcerations of gums, etc., occasioned by excessive salivation. *Ellis.*

Plaster of Sulphate of Zinc.

℞. Simple plaster,
eight hundred parts.
White wax, fifty parts.
Fuse and add

Sulphate of zinc, twenty-five parts, previously dissolved in a little water. Agitate continually until the water has evaporated, and cool.

This is the *emplâtre diapalme* of the *French Codex.*

Injection of Sulphate of Zinc.

℞ Sulphate of zinc, one drachm.
Camphor water, two fl. ounces.
Water, two pints.
Mix. *Swediaur.*

℞ Sulphate of zinc, ten grains.
Powdered gum Arabic, two drachms.
Laudanum, one fl. drachm.
Distilled water, eight fl. ounces.
Mix. In gonorrhœa. *Ellis.*

Lotion of Sulphate of Zinc.

℞ Sulphate of zinc, sixteen grains.
Rose water, sixteen fl. ounces.
Mix. *Béral.*

℞ Sulphate of zinc, half a drachm.
Water,
Lead water, each, half a pint.
Mix. *Beasley.*

℞ Sulphate of zinc, four scruples.
Distilled vinegar, one pint.
Mix. *Béral.*

Sulphate of Zinc Mixture.

℞ Sulphate of zinc, one grain.
Decoction of cascarilla, twelve fl. drachms.
Simple syrup, four fl. drachms.
Mix, to be divided into four doses, one to be taken three times a day, in hooping-cough. *Ainslie.*

ZINCI SULPHO-CARBOLAS.

Sulpho-Carbolate of Zinc.

Solution of Sulphocarbolate of Zinc.

℞ Sulpho-carbolate of zinc, three to six grains.
Water, one ounce.
Dissolve. As an injection in gonorrhœa, and as a dressing for wounds and sores. *J. Wood.*

Collodion with Sulphocarbolate of Zinc.

℞ Sulphocarbolate of zinc, one drachm.
Collodion, eight fl. ounces.
Dissolve the salt in a little alcohol, and mix with collodion. *C. L. Mitchell.*

ZINCI VALERIANAS.

Valerianate of Zinc.

To the aqueous distillate obtained from valerian root, alcohol is added to dissolve the oil globules; a sufficient quantity of oxide of zinc, previously rubbed up with alcohol, is added, the mixture is heated to the boiling point, rapidly filtered, and set aside to crystallize. The crystals are washed with cold water, drained, and dried. *Guilliermond.*

℞ Sulphate of zinc, five and three-quarter ounces.
Valerianate of sodium, five ounces.
Distilled water, sufficient.
Dissolve the salts each in forty ounces of the water, heat to near the boiling point, mix, and cool. Remove the crystals, evaporate mother-liquor at 200° to four fl. ounces and crystallize. Drain and wash the crystals with a little cold water, and dry. *Brit. Ph.*

℞ Contused valerian, thirty-two ounces.
Water, eight pounds.
Sulphuric acid, three ounces.
Macerate for two days, and distil as long as product reddens litmus paper. Expose to the air for a month, then put it in a matrass with two hundred and twenty-five grains of recently-prepared oxide of zinc, and digest on a sand-bath for eight or ten hours, at 175° F., agitating occasionally; filter whilst hot, evaporate to three-fourths, and dry the residue on earthen plates. *Buisson.*

Has been recommended as a powerful nervine tonic, and antispasmodic, in neuralgia and hysteria. Dose, one to three grains, in the form of pills.

Pills of Valerianate of Zinc.

℞ Valerianate of zinc, nine grains.
Tragacanth, thirty grains.
Mix, and make twelve pills. One, morning and evening, in nervous headache, etc. *Devay.*

Mixture of Valerianate of Zinc.

℞ Valerianate of zinc, one grain and a half.
Distilled water, five fl. drachms.

Syrup, one fl. ounce.
Mix. A tablespoonful every half hour.
Devay.

ZINGIBER.

Ginger.

The rhizome of *Zingiber officinale*, a small herbaceous, perennial plant, a native of the East Indies.

Sex. Syst. Monand. monog. *Nat. Syst.* Zingiberaceæ.

Roscoe, Trans. Linn. Soc. viii. 348. Griffith, Med. Bot. 629.

The rhizome or root is creeping, knotty, lobated or palmated, and fleshy; with an agreeable, pungent, camphoraceous odor, and an aromatic, acrid, burning taste. Two kinds are met with in commerce, the black and the white; the first consists of the roots, scalded in hot water and dried; the second is also composed of the roots, but deprived of their epidermis previous to desiccation. Ginger contains a volatile oil, a soft, acrid resin, some gum, various salts, and the usual vegetable constituents. It is stimulating, somewhat acrid, aromatic, and stomachic. It is given in doses of ten grains to a scruple, or more.

Infusion of Ginger.

℞. Bruised ginger, half a troyounce.
Boiling water, one pint.

Macerate for two hours in a covered vessel, and strain.

Dose, a wineglassful. *U. S. Ph.*

Ginger Lozenges.

℞. Powdered ginger, two ounces.
" sugar, fifteen ounces.
Mucilage of tragacanth, sufficient.

Mix well, and form lozenges of sixteen grains each. *Soubeiran.*

℞. Tincture of ginger, two fl. ounces.
Powdered sugar, twenty troyounces.
" tragacanth, half a troyounce.
Syrup of ginger, sufficient.

Mix the tincture with the sugar, evaporate the alcohol spontaneously, powder, add the tragacanth, and with the syrup form a mass to be divided into four hundred and eighty troches. *U. S. Ph.*

Ginger Beer.

℞. Sugar, three pounds.
Bruised ginger, two ounces.
Cream of tartar, one ounce.
Lemons, sliced, four.
Yeast, eight fl. ounces.
Boiling water, four gallons.

Pour the water on the four first-named ingredients, infuse for two hours, and strain; then add the yeast, and, when fermentation has commenced, pour into strong bottles and wire down the corks. *Redwood.*

℞. White sugar, twenty pounds.
Lemon juice, eighteen fl. ounces.
Honey, one pound.
Bruised ginger, twenty-two ounces.
Water, eighteen gallons.

Boil the ginger in three gallons of the water for half an hour; add the sugar, lemon juice, and honey with the remainder of the water, and strain; when cold add the white of an egg and half a fl. ounce of essence of lemon; let rest for four days, and bottle. *Pereira.*

Syrup of Ginger.

℞. Fluid extract of ginger, one fl. ounce.
Carbonate of magnesium, two drachms.
Water, forty-two fl. ounces.
Sugar, seventy-two troyounces.

Rub the fluid extract with the carbonate and two troyounces of the sugar, then with the water gradually added, and filter; add the remainder of the sugar, dissolve with a gentle heat, and strain while hot. *U. S. Ph.*

℞. Strong tincture of ginger, six fl. drachms.
Syrup, nineteen fl. ounces.

Mix by agitation. *Brit. Ph.*

Fluid Extract of Ginger.

℞. Ginger, in powder, No. 50, sixteen troyounces.
Alcohol, sufficient.

Moisten the ginger with four fl. ounces of alcohol, pack firmly in a percolator, add twelve fl. ounces of alcohol, and macerate for four days; then displace twenty-four fl. ounces, reserving the first fourteen, evaporate the remainder to two fl. ounces, and mix with the reserved portion. *U. S. Ph.*

Dose, five to twenty minims.

Strong Tincture of Ginger.

℞. Ginger in fine powder, ten ounces.
Rectified spirit, sufficient.

Obtain by slow displacement one pint (twenty fl. ounces). *Brit. Ph.*

Tincture of Ginger.

℞. Ginger, bruised, eight troyounces.
Alcohol, sufficient.

Obtain by displacement two pints. *U. S. Ph.*

Dose, half to one fl. drachm. The tincture of *Brit. Ph.* is about one-half this strength. *Paris Codex* and *Ph. Germ.* direct one part of ginger to five parts of alcohol, sp. gr. 0.892.

Oil of Ginger.

℞. Ginger, one part.
Water, six parts.

Digest for five or six days; distil, and collect the oil.

Oleoresin of Ginger.

℞. Ginger, in powder,
No. 60, twelve troyounces.
Stronger ether, twelve fl. ounces.
Alcohol, sufficient.

Press the ginger firmly into a suitable percolator, add the ether, and then sufficient alcohol to obtain twelve fl. ounces of percolate. Distil the greater part of the ether, and evaporate the remaining ether spontaneously. *U. S. Ph.*

One part of the oleoresin corresponds to about sixteen of ginger.

Syrup of Oleoresin of Ginger.

℞. Oleoresin of ginger, one scruple.
Syrup, one ounce.

Dissolve, and strain, after twenty-four hours' digestion. *Béral*

Essence of Ginger.

℞. Jamaica ginger, four ounces.
French brandy, one pint.

Powder the ginger coarsely, moisten it with the brandy, put it in a displacer, and pour the remainder of the brandy on it; when it ceases to pass, add diluted alcohol, till one pint has passed in all.

℞. Bruised Jamaica ginger,
twelve pounds.
Alcohol, two gallons and a half.

Digest fourteen days, express, strain, and reduce by distillation, to one gallon. Cool, and filter. A most excellent preparation. *Cooley.*

℞. Powdered ginger,
" animal charcoal,
equal parts.
Alcohol, sufficient.

Moisten the powders for twenty-four hours, with sufficient alcohol to cover them; then transfer to a percolator, and return the first runnings two or three times. Change the receiver, and gradually pour on alcohol, as required, until as much essence is obtained as there was ginger employed. *Cooley.*

Spice Plaster.

℞. Powdered ginger, two ounces.
" cloves,
" cinnamon, each,
one ounce.
" red pepper, two drms.
Tincture of ginger, half an ounce.
Honey, sufficient.

Mix the powders; add the tincture, and sufficient honey to make of proper consistence for a stiff cataplasm. *W. Procter.*

ADDENDA.

Under this title will be found a few articles belonging to the Formulary proper, together with a large number of practical receipts, which could not have been introduced, with propriety, under any of the officinal heads.

Fleming's Tincture of Aconite.

℞. Powdered aconite root,
(troy) sixteen ounces.
Rectified spirit, sixteen fl. ounces.

Macerate for four days, then pack in a percolator, and add rectified spirit until twenty-four fl. ounces of tincture are obtained.

Dose, two to three minims, as an anodyne. *Pereira.*

Blacket's Tincture of Belladonna.

℞. Extract of belladonna,
ten drachms.
Proof spirit, one pound.

Macerate, dissolve, and strain.

Dose, two or three minims as an anodyne. *Lond. Ph. Jour.*

Acoustic Balsam.

℞. Compound tincture of benzoin, } each, one
Tincture of castor, } fl. ounce.
" opium, }
Essential oil of assafetida,
five drops.

Mix. *Cooley.*

℞. Tincture of ambergris, } each,
" assafetida, } one fl.
" castor, } ounce.
" opium, }
Terebinthinated balsam of sulphur,
Oil of rue, each, fifteen drops.

Mix. One or two drops are poured into the ear, or a piece of wool moistened therewith is introduced, in cases of atonic deafness. *Baumé.*

Clemens' Solution of Arsenic and Bromine.

℞. Arsenious acid,
Carbonate of potassium,
each, one drachm.

Dissolve in water, dilute to twelve fl. ounces, and add

Bromine, two drachms.

Digest until colorless. Dose, three or four drops, twice a day, in water. *Dorvault.*

Medicated Waters.

℞. Any essential oil, two drachms.
Precipitated chalk, one ounce.
Alcohol, two fl. ounces.
Distilled water, one gallon.

Rub the oil with the chalk, then add the spirit gradually, and when completely dissolved, pour in the water by degrees; let it stand three minutes, and filter through close paper.

Mr. John Fordred affirms that chalk is decidedly preferable to the carbonate of magnesium, in preparing medicated waters. *Lond. Phar. Jour.*

Extemporaneous Preparation of Medicated Waters.

℞. Any essential oil, two drops.
Carbonate of magnesium,
six grains.

Rub together, and add gradually

Water, one fl. ounce.

Filter the solution through bibulous paper.

Process for Coating Pills.

℞. Flaxseed, one part.
White sugar, three parts.
Distilled water, sufficient.

Pour the boiling water on the seed to extract the mucilage, separate the thick mucilage, add the sugar, and carefully drive off the whole of the moisture by evaporation. Reduce the dried mucilage to powder, in which the pills (having been previously moistened) are to be rolled until covered with a layer of the compound. *Calloud.*

℞. Butter of cacao, at will.

Melt. Throw the prepared pills into the melted butter, then remove them with a perforated skimmer, and roll them in powdered sugar, or sugar of milk. *Calloud.*

Pastilles de Paris.

℞. Powdered cubebs,
one ounce and a half.
" gum Arabic, one ounce.
" liquorice,
" sugar, each,
four ounces.
Oil of lemon, fifty drops.

Mix, and make lozenges of eight grains.

Eau de Pagliari.

℞. Tincture of benzoin,
eight fl. ounces.
Alum, one pound.
Water, ten pounds.

Mix. This preparation is said to possess an extraordinary power of coagulating the blood. *Sedillot.*

Jackson's Pectoral Lozenges.

℞. Powdered ipecacuanha, ten grains.
Precipitated sulphuret of antimony, five grains.
Muriate of morphia, six grains.
Powdered gum Arabic, } each,
" sugar, } eleven
" liquorice, } drachms.
Oil of sassafras, four drops.
Tincture of Tolu, four fl. drachms.
Syrup, sufficient.

Mix, and divide into two hundred lozenges. *S. Jackson.*

Jackson's Pectoral Syrup.

℞. Sassafras pith, one drachm.
Gum Arabic, one ounce.
Water, one pint.

Macerate twelve hours, then add

Sugar, twenty-one ounces.

Dissolve without heat, strain, and add

Muriate of morphia, eight grains.

Mix carefully, and add water sufficient to make the whole measure two pints. Dose, a teaspoonful to a tablespoonful, every three hours. *S. Jackson.*

Kirkland's Neutral Cerate.

℞. Lead plaster, eight ounces.
Olive oil, four ounces.

Melt, and while fluid, add

Prepared chalk, four ounces.

Stir, until sufficiently cooled, then add

Acetic acid, four fl. ounces.
Acetate of lead, three drachms.

Mix. *Paris.*

Chlorodyne.

℞. Muriate of morphia, eight grains.
Oil of peppermint, two drops.
Tincture of Indian hemp, } each,
Chloric ether, } one drachm.
Treacle, }
Chloroform, six drachms.
Scheele's hydrocyanic acid, twelve drops.
Perchloric acid, twenty drops.
Tincture of capsicum, half a drachm.

Dissolve and mix. *Ogden.*

℞. Muriate of morphia, eight grains.
Oil of peppermint, sixteen minims.
Stronger ether, one fl. ounce.
Extract of liquorice, two and a half troyounces.
Pure chloroform, } each,
Stronger alcohol, } four fl. cunces.
Molasses, }
Officinal hydrocyanic acid, two fl. ounces.
Syrup, seventeen and a half fl. ounces.

Dissolve the morphia and oil in the alcohol, and add chloroform and ether. Mix liquorice, syrup, and molasses, shake the two mixtures, and add the hydrocyanic acid. Dose, five to ten minims, the vial to be well shaken. *Maryland Coll. Ph.*

Formulas for Elixirs and other Preparations.

Adopted by the American Pharmaceutical Association, 1873.

Compound Powder of Cochineal.

℞. Cochineal, } each,
Alum, } two
Carbonate of potassium, } drachms.
Bitartrate of potassium, four drachms.

Mix the powders thoroughly.

Compound Tincture of Cochineal.

℞. Compound powder of cochineal, two drachms.
Diluted alcohol, two fl. ounces.

Macerate for twelve hours, and strain.

Spirit of Orange.

℞. Oil of sweet orange, one fl. ounce.
Stronger alcohol, fifteen fl. ounces.

Dissolve.

Simple Elixir.

℞. Spirit of orange, half a fl. ounce.
Stronger alcohol, four fl. ounces.
Cinnamon water,
Syrup, each, six fl. ounces.

Mix, and clarify with paper pulp, made of sixty grains of filtering paper.

Red Elixir.

℞. Compound tincture of cochineal, half a fl. ounce.
Simple elixir, sixteen fl. ounces.

Mix.

Elixir of Calisaya Bark.

℞. Tincture of cinchona, *U. S. Ph.*, twenty-two fl. drachms.
Simple elixir, sufficient

for fl. sixteen ounces. Mix. A fl. drachm represents two grains of Calisaya bark.

Elixir of Calisaya Bark with Iron.

℞. Elixir of Calisaya, fifteen fl. ounces.
Warm distilled water, one fl. ounce.
Ammonio-citrate of iron, two drachms.

Dissolve and mix.

Compound Elixir of Cinchona.

℞. Compound tincture of cinchona, *U. S. Ph.*, twenty-two fl. drachms.
Simple elixir, sufficient

to make sixteen fl. ounces. Mix and filter.

Compound Elixir of Cinchona with Iron.

℞. Compound elixir of cinchona, fifteen fl. ounces.
Warm distilled water, one fl. ounce.
Ammonio-citrate of iron, two drachms.

Dissolve and mix.

Elixir of Citrate of Iron.

℞. Ammonio-citrate of iron, two hundred and fifty-six grs.
Warm distilled water, one fl. ounce.
Simple elixir, fifteen fl. ounces.

Dissolve and filter.

Elixir of Pyrophosphate of Iron.

Made like the preceding, with two hundred and fifty-six grains of pyrophosphate of iron.

Elixir of Citrate of Bismuth.

Made like the preceding, with two hundred and fifty-six grains of ammonio-phosphate of bismuth.

Elixir of Pepsin.

℞. Pepsin made by Scheffer's formula, two hundred and fifty-six grains.
Sherry wine, fourteen fl. ounces.
Syrup, two fl. ounces.
Fluid extract of ginger, twenty-five drops.

Dissolve and mix.

Elixir of Valerianate of Ammonium.

℞. Valerianate of ammonium, two hundred and fifty-six grs.
Simple elixir, fifteen and a half fl. ounces.
Compound tincture of cochineal, half a fl. ounce.

Dissolve the salt in two ounces of the elixir, neutralize with ammonia, and add remainder.

Elixir of Valerianate of Ammonium with Quinia.

℞. Elixir of valerianate of ammonium, one pint.
Sulphate of quinia, one hundred and twenty-eight grains.

Dissolve.

Tincture of Sumbul.

See page 565.

Compound Elixir of Sumbul.

See page 566.

Elixir of Pyrophosphate of Iron, Quinia, and Strychnia.

C. L. Diehl's Formula, p. 558.

Elixir of Gentian with Iron.

℞ Extract of gentian,
Ammonio-citrate of iron,
each, one hundred and twenty-eight grains.
Warm distilled water, one fl. ounce.
Simple elixir, fifteen fl. ounces.

Dissolve and mix.

Bitter Wine of Iron.

℞ Sulphate of cinchonia, forty-five grains.
Sulphate of quinia, fifteen grains.
Citric acid, sixty grains.
Ammonio-citrate of iron, four drachms.
Concentrated tincture of fresh sweet orange-peel,
Distilled water,
each, three fl. ounces.
Sherry wine, eight fl. ounces.
Syrup, two fl. ounces.

Dissolve the sulphates and acid in two fl. ounces, and the iron in the remaining water; mix the solutions, and add the other ingredients.

Syrup of Liquorice Root.

℞ Powdered liquorice root, four troyounces.
Diluted alcohol, sufficient.
Sugar, twelve troyounces.

Exhaust the powder with diluted alcohol, evaporate by a water-bath to ten fl. ounces, filter, and dissolve the sugar. The syrup should measure sixteen fl. ounces.

Recommended for masking the bitterness of quinia.

ANATOMICAL INJECTIONS.

I. For Preserving the Body.

A. Molasses Injection.

℞ Boiling water, two gallons.
Common salt, sufficient

to saturate.

Nitre, two to four ounces.
Molasses, four ounces.

Mix together, and boil for a few minutes. The proportions of nitre and molasses are variable. This injection penetrates well, and it will preserve the body long enough for dissecting purposes.

B. Chloride of Zinc Injection.

℞ Commercial muriatic acid, ten pounds.

Add gradually

Scrap zinc, more than sufficient

to neutralize the acid.

This solution is extremely concentrated and acrid. Where the body is to be kept during the summer months, the Editor deems it advisable to throw the undiluted solution into the aorta until the fluid oozes from an incision made into the cellular tissue of one of the toes. About half a gallon is usually required to effect this object. In winter, one to three pints, diluted with water, will answer.

As a mere preservative nothing can surpass this injection; but it is open to the serious objection of bleaching the tissues.

C. Nitrate of Lead Injection.

℞ Nitric acid, ten pounds.
Powdered litharge, more than sufficient

to saturate.

Mix. One to two pints of this fluid may be advantageously added to a solution of salt containing a little nitre. The mixture forms a good preservative injection; giving a rusty, rather than a bleached appearance to the tissues.

D. Method of Preserving a Corpse.

℞ Corrosive sublimate, sufficient

to saturate

Alcohol, three pints.

This mixture is to be thrown into the aorta. To be followed daily for three successive days by the same quantity of a saturated solution of the acetate of aluminium. The surface of the body is to be frequently washed with the latter solution. By this method the natural appearance of the body may be retained for a week.

W. R. Grant.

E. Gannal's Injection.

℞ Sulphate of aluminium, two pounds.
Acetate of lead, half a pound.

Dissolve the salts separately, in water, mix the solutions, and filter.

The body is to be injected with six pints of this fluid, by one of the large arteries.

Dorvault.

II. For Arterial and Venous Preparations.

A. For Coarse Objects.

℞ Tallow,
Resin,
Yellow wax, } equal parts.

Melt over a slow fire, and add sufficient red lead or vermilion to color.

℞ Wax, sixteen ounces.
Resin,
Turpentine varnish,
each, eight ounces.
Vermilion, one ounce.

Melt the wax and resin, stirring in the varnish and vermilion.

This injection is liable to melt in warm weather, thus giving a flattened appearance to the bloodvessels.

℞ Tallow, two pounds.
Magnesia, half an ounce.
Vermilion, one ounce.

Melt the tallow, and stir in the magnesia and vermilion.

This, like the two former injections, is thrown in hot. The following is used cold, and hence is called the *cold paint injection.*

℞ White lead, well ground,
two pounds.
Turpentine varnish,
twelve drachms.
Linseed oil, six ounces.

Grind the white lead and varnish together, add the oil, and rub to the consistence of cream; in which state it is to be thrown into the arteries. *Dublin Dissector.*

B. For Fine Preparations.

℞ Lead, five parts.

Melt, and add

Bismuth, eight parts.
Tin, three parts.
Mercury, two parts.

Melt. This *liquid amalgam* is used for injecting the kidneys and other organs.

Francis.

℞ Glue, one ounce.

Dissolve, and add

Strong size, one pint.
Vermilion, or other coloring matter, one ounce and a half.

Mix. *Francis.*

℞ Canada balsam, one pound.
Vermilion, sufficient to color.

Mix intimately. *Dorvault.*

C. For Preserving Specimens.

In the anatomical museums of this country it is customary to use alcohol in the preservation of specimens.

For the brain, nerve-matter, and ligaments, strong alcohol is employed. For other parts, a mixture of two parts of alcohol and one of water is found to answer.

The following are possessed of much merit as preservative fluids:—

℞ Saturate water with sulphurous acid, and add a little creasote.

Cooley.

℞ Powdered corrosive sublimate, two drachms.
Alcohol, one pint.

Mix, dissolve, and decant after twenty-four hours. *Francis.*

Goadby's Solutions.

	No. 1.	No. 2.	No. 3.
Salt,	4 oz.	4 oz.	8 oz.
Alum,	2 oz.	2 oz.	
Corrosive sublimate,	2 grs.	3 grs.	2 grs.
Water,	2 pts.	4 pts.	2 pts.

Mr. Goadby usually employs No. 1; but for delicate preparations that might be injured by a concentrated solution, he substitutes No. 2. As alum decomposes osseous matter, No. 3 is used when the tissues contain carbonate of lime.

	No. 4.	No. 5.
Salt,	8 oz.	8 oz.
Corrosive sublimate,		15 grs.
Arsenious acid,	15 grs.	15 grs.
Water,	2 pts.	2 pts.

These solutions are used for old and soft preparations. *Dorvault.*

Reboulet's Solution.

℞ Nitre, one part.
Alum, two parts.
Chlorinated lime, four parts.
Water, sixteen parts.

To be afterwards diluted according to circumstances. *Cooley.*

Blacking.

No. 1.

℞ Ivory black, twelve ounces.
Treacle, four ounces.
Sperm oil, one ounce.
Vinegar, two pints.
Oil of vitriol (by weight), two ounces.

Mix the first three ingredients, and add the vinegar gradually, stirring after each addition; add the oil of vitriol very carefully, stirring constantly until the effervescence ceases. *Lond. Ph. Jour.*

No. 2.

℞ Ivory black,
Treacle, each, twelve ounces.
Sperm oil,
Oil of vitriol, each, three ounces.
Vinegar, four pints.

Mix the ivory black, treacle, and vinegar together; then mix the sperm oil and oil of vitriol separately, and add them to the other mixture. *Redwood.*

No. 3.—(*Liquid.*)

℞ Ivory black, in fine powder, one pound.
Treacle, three-fourths of a pound.
Sweet oil, two ounces.
Beer,
Vinegar, each, one pint.

Rub the first three together until uniformly mixed, then add the beer and vinegar. *Cooley.*

No. 4.

℞ Ivory black, sixteen parts.
Treacle, eight parts.
Oil of vitriol four parts,
Diluted with
Water, two parts.
Gum Arabic, one part.
Soft water, sixty-four parts.
Mix as before. *Cooley.*

No. 5.—(*Paste.*)

℞ Ivory black, in powder, one pound and a quarter.
Treacle, one pound.
Sweet oil, two ounces.
Rub together till well mixed, then add
Vinegar, sufficient
to form a paste. *Cooley.*

Blacking for Grates.

℞ Asphaltum, four pounds.
Melt, and add
Linseed oil, two pounds.
Oil of turpentine, one gallon.
Mix. *Gray.*

Boot Composition.

℞ Boiled linseed oil, one pint.
Oil of turpentine, } each,
Black resin, } each,
Wax, } three ounces.

Melt the wax and resin together, and stir in the boiling oil; then remove the pot from the fire, and when it has cooled a little, add the turpentine, and mix. *Cooley.*

℞ Caoutchouc, two drachms.
Mineral naphtha, two ounces.
Asphaltum,
Ivory black, each, half an ounce.
Oil of turpentine, one ounce.

Dissolve the caoutchouc in the naphtha, and the asphaltum in the turpentine; mix the two solutions, and add the ivory black. *Lond. Ph. Jour.*

Both of these compositions are reputed to be water-proof.

Bug Poison.

No. 1.

℞ Alcohol, one hundred and twenty parts.
Camphor, two parts.
Oil of turpentine, four parts.
Corrosive sublimate, one part.
Mix and dissolve. *Dorvault.*

No. 2.

℞ Coal-tar naphtha,
Oil of turpentine, equal parts.
Mix. *Redwood.*

No. 3.

For Roaches and Ants.

℞ Arsenic, in powder, one part.
Mashed potatoes, three parts.
Mix.

No. 4.

For Roaches, Rats, Mice, Etc.

℞ Phosphorus, eight parts.
Tepid water, } each, one hundred
Rye meal, } each, one hundred
Butter, } and eighty parts.

Sugar, one hundred and twenty-five parts.

Liquefy the phosphorus in the tepid water in a bottle, and mix it in a mortar with the rye meal; when cold, add the butter and sugar, and mix them all thoroughly together. *Gray.*

No. 5.

For Flies, Etc.

℞ Rasped quassia, two drachms.
Boiling water, one pint.

Boil together for a few minutes, strain, and add

Molasses, four fl. ounces.

Mix. *Dorvault.*

Cements.

Diamond Cement.

℞ Isinglass, two drachms.

Sprinkle it with water, and when soft, dissolve it in the smallest possible quantity of proof spirit by a moderate heat.

℞ Mastich, one drachm.
Rectified spirit, three fl. drachms.

Dissolve. Mix the two solutions, and stir in one drachm of powdered ammoniac rubbed down with a little water. Keep the cement in a bottle. When wanted for use, plunge the bottle in warm water to soften the cement, which is applied in thin layers on the fractured surfaces, and the pieces are to be held in firm contact till cool.

Used for setting jewelry, mending china, etc. *Lond. Ph. Jour.*

Cement for China and Stoneware.

Gelatin is allowed to swell in cold water, the jelly is warmed, and so much freshly-slaked lime is added as is necessary to thicken the mass. A thin coating of this cement is applied warm to the gently-heated surface, and the pieces are held together under strong pressure. *Heller.*

℞ Whites of eggs, at will.
Finely powdered quicklime, sufficient

to thicken. Used for mending china, etc.; but it does not resist moisture.

℞ Shellac, at will.
Alcohol, sufficient

to form a liquid of the consistence of molasses.

This is an excellent cement.

Cement for the Laboratory.

℞ Resin, five pounds.
Dry red ochre, in fine powder,
Wax, each, one pound.
Plaster of Paris, two to four ounces.

Melt the resin and wax, add the ochre, and, lastly, the plaster. Mix well together. *Singer.*

Luting for Bottles, etc.

Melt common resin and yellow wax together, and add red ochre in small quantities, and when of the proper consistence, boil for six or eight minutes; add a small quantity of oil of turpentine, and stir well with a spatula. The proportions of the different constituents vary, the luting being more or less brittle, or elastic, as the ochre prevails. *Francis.*

℞ Flour,
Whiting, each, ten parts.
Common salt, one part.

Mix and add sufficient water to make a paste. This is used by the distillers of spirituous liquors. *Francis.*

℞ Sal ammoniac,
Whiting, equal parts.
Water, sufficient

to form a paste. This forms a good lute. *Francis.*

℞ Common clay,
Whiting, equal parts.
Water, sufficient

to form a paste. This lute will stand a high heat. *Francis.*

Colors for Show-bottles.

Blue.

℞ Sulphate of copper,
Alum, each, one ounce.
Water, two pints.
Sulphuric acid, half an ounce.

Mix, and dissolve.

℞ Prussian blue, ten grains.
Oxalic acid, twenty grains.
Water, one pint.

Dissolve.

℞ *A.* Dissolve ammonio-sulphate of copper, and ammonio-nitrate of nickel (prepared by dissolving nickel in diluted nitric acid, and

adding ammonia in excess), in water.

B. Dissolve the sulphate of indigo in water.

C. Dissolve Prussian blue in diluted muriatic acid, and dilute with water.

Purple.

℞. Verdigris, two drachms.
Spirit of hartshorn, four ounces.
Water, one pint and a half.
Mix.

℞. Sulphate of copper, one ounce.
Carbonate of ammonium, one ounce and a half.
Water, two pints and a half.
Mix.

℞. Infusion of logwood, two pints.
Spirit of hartshorn, sufficient to produce the desired hue.
Mix.

Lilac.

℞. Add carbonate of ammonium to a solution of nitrate of cobalt, until the precipitate first formed is redissolved; adding ammonio-sulphate of copper to bring out the desired tint.

℞. Dissolve zaffre (impure oxide of cobalt) in muriatic acid, filter, and add carbonate of ammonium in excess; to this add ammonio-sulphate of copper, until the required color is produced.

Orange.

℞. Dissolve bichromate of potassium in water till the desired tint is obtained.

A little sulphuric acid is sometimes added.

Yellow.

℞. Bichromate of potassium, six drachms.
Carbonate of potassium, four drachms.
Water, sixteen ounces.
Mix.

Red.

℞. *A.* Color the spirit of hartshorn, or an aqueous solution of sal ammoniac, with cochineal.

B. Add vinegar to red-beet liquor, or to red-cabbage liquor.

C. Dissolve carmine in the solution of ammonia, and dilute with water.

Green.

℞. *A.* Dissolve three ounces of verdigris in sulphuric acid, and add four pints of water.

B. Dissolve one ounce of nickel in six ounces of nitric acid, and add five pints of water.

C. Dissolve ammonio-sulphate of copper in water, and add bichromate of potassium, until the required color is produced.

Dentifrice.

No. 1.

℞. Powdered tormentilla, eighty parts.
" orris root, forty parts.
Cream of tartar, twenty parts.
Fused chloride of calcium, four parts.

Reduce the chloride rapidly to powder, and mix it with the other ingredients.

Hainault.

No. 2.

℞. Powdered Peruvian bark, one ounce.
" myrrh, } each, half
" rhatany, } an ounce.
" orris root, }

Mix carefully.

No. 3.

℞. Powdered Peruvian bark,
" myrrh, each, half an ounce.
" charcoal, two ounces.

Mix.

Depilatories.

No. 1.

℞. Sulphuret of sodium, three parts.
Quicklime, in powder, ten parts.
Starch, ten parts.

Mix. Rub a little of this powder with water, apply it to the part, and remove the hair in a minute or two with a wooden knife. *F. Boudet.*

No. 2.

℞. To a strong solution of sulphuret of barium, add sufficient powdered starch to make a paste. It is used like the preceding.

Redwood.

Mixtures for Colored Fires.

Red Fire.

℞. Dried nitrate of strontium, seventy-two parts.
Sulphur, twenty parts.
Gunpowder, eight parts.
Coal dust, two parts.

Mix. This mixture is liable to spontaneous explosion. *Redwood.*

℞. Chlorate of potassium, sixty-one parts.
Sulphur, sixteen parts.
Carbonate of strontium, twenty-three parts.

Mix the powders with the hand. *Marchand.*

Yellow Fire.

℞. Chlorate of potassium, sixty-one parts.
Sulphur, sixteen parts.
Dry carbonate of sodium, twenty-three parts.

Mix. *Marchand.*

℞. Dried nitrate of sodium, seventy-four and a half parts.
Sulphur, nineteen and a half parts.
Charcoal, six parts.

Mix. *Gray.*

Blue Fire.

℞. Nitre, five parts.
Sulphur, two parts.
Metallic antimony, one part.

Mix. *Gray.*

℞. Chlorate of potassium, sixty-one parts.
Sulphur, sixteen parts.
Strongly-calcined alum, twenty-three parts.

Mix. *Marchand.*

Green Fire.

℞. Chlorate of potassium, seventy-three parts.
Sulphur, seventeen parts.
Boracid acid, ten parts.

Mix. *Marchand.*

Violet Fire.

℞. Chlorate of potassium, sixty parts.
Sulphur, sixteen parts.
Carbonate of potassium,
Alum, each, twelve parts.

Mix. *Marchand.*

White Fire.

℞. Nitre, forty-six and a half parts.
Sulphur, twenty-three parts.
Gunpowder, twelve and a half parts.
Zinc powder, eighteen parts.

Mix. *Gray.*

Liquid Glue.

℞. Glue, two pounds and a half.
Water, two pints and a quarter.

Dissolve in a water-bath, and add gradually

Nitric acid (sp. gr. 1.32), seven ounces.

Remove from the fire, and stand aside to cool.

This glue keeps well, and is used for a variety of purposes. *Dumoulin.*

Marine Glue.

℞. Caoutchouc, two to four parts.
Coal-tar naphtha, thirty-four parts.

Mix, dissolve by heat, and add

Powdered shellac, sixty-four parts.

Heat gently, and stir till uniformly mixed; then pour out on plates to harden.

When used, it is necessary to heat the cement to 248° F. and apply it with a brush.

The union made by this cement is very durable. *Dorvault.*

Inks.

Black Ink.

℞. Chipped logwood, twenty-two pounds.
Boiling water, sufficient

to yield fourteen gallons of filtered decoction. When cold, add, very gradually,

Yellow chromate of potassium, sufficient

to obtain the required color.

This ink does not corrode steel pens. *Runge.*

℞. Powdered extract of logwood, (avoir.) twelve ounces.
Bichromate of potassium, half an ounce.
Water, five gallons.

Dissolve the ingredients separately in water, and mix them.

In a short time the ink will be fit for use. *W. H. Pile.*

Blue Ink.

℞. Triturate six parts of Prussian blue with a little water and one part of oxalic acid, and dilute with water. *Mohr.*

℞. Powdered Prussian blue, one ounce.
Concentrated hydrochloric acid, one and a half fl. ounces.

Mix in a glass bottle, and after thirty hours dissolve in water. *Cooley.*

℞. Dissolve indigo in sulphuric acid, and add water to produce the proper shade. As much potassa is to be added as the liquid will bear without dropping its color. *Cooley.*

Red Ink.

℞. Pure carmine, twenty grains.
Water of ammonia, three ounces.

Dissolve, and add

Powdered gum, eighteen grains.

Mix.

Where expense constitutes an objection, half a drachm of powdered drop-lake may be substituted for the powdered carmine. *Buchner's Repert.*

℞. Cochineal, powdered, one ounce.
Hot water, eight fl. ounces.

Digest, cool, and add

Ammonia water, one fl. ounce.
Water, three fl. ounces.

Macerate for some days. *Cooley.*

℞. Brazil wood, four ounces.
Alum, two ounces.
Distilled water, two pints.

Boil for fifteen minutes, and strain; then add

Powdered gum Arabic, one ounce.

Mix, and bottle for use. *Gray.*

Anilin Inks.

℞. Dissolve fuchsin (or other anilin color) in alcohol, add the solution to soft water, until the desired shade is obtained, and dissolve in each pint two or three drachms of gum Arabic.

Indelible Ink.

℞. Nitrate of silver, two drachms.
Gum Arabic, one drachm.
Distilled water, one fl. ounce.
Indian ink, sufficient to color.

Mix and dissolve.

℞. Carbonate of sodium, in crystals, two ounces.
Gum Arabic, two drachms.
Water, four fl. ounces.

Mix.

The place to be marked is moistened with the last solution and dried. It is then to be marked with a pen dipped in the first solution, and afterwards exposed to the rays of the sun; and washed after twenty-four hours. *U. S. Disp.*

Pomatum.

℞. Beef marrow, seventeen drachms.
Nervine balsam (see p. 499), seventeen drachms.
Rose oil, two drachms.

Mix together, and add

Alcoholic extract of cantharides, six grains,

dissolved in a little alcohol. *Dupuytren.*

℞. Beef marrow, three to four ounces.
Castor oil, one ounce.

Melt, and strain the marrow, add the oil, and, as the mixture cools, beat continually until it assumes a white, frothy appearance; flavoring with extract of orange.

Putty.

Whiting made into a paste with boiled linseed oil.

Sealing Wax.

Red.

℞. Shellac, two pounds.
Venice turpentine, one pound.
Vermilion, or best dichromate of lead, one pound and a half.

Melt the shellac and turpentine together, and add the pigment as the mixture cools. *Redwood.*

Black

Is made in the same way as the red, only substituting the best lampblack for vermilion or dichromate of lead.

In like manner, other colors are imparted by varying the pigment, and using chromate of lead, verdigris, green verditer, etc.

Redwood.

Bottle Wax.

R. Black resin, six pounds.
Beeswax, half a pound.
Ivory-black, or lampblack, one pound and a half.

Melt the resin and wax, and stir in the ivory-black.

Venetian red, red lead, or bole, may be substituted for lampblack. *Redwood.*

Solders.

Solder for Tin-plate.

R. Tin, two parts.
Lead, one part.

Mix.

Solder for Pewter.

R. Tin, ten parts.
Lead, five parts.
Bismuth, one part.

Mix.

Solder for Iron, Copper, and Brass.

R. Copper,
Zinc, equal parts.

Mix.

Solder for Zinc and Lead.

R. Lead, two parts.
Tin, one part.

Mix.

Solder for Silver.

R. Silver, five parts.
Brass, six parts.
Zinc, two parts.

Mix. *Gray's Supp.*

Solder for Gold.

R. Gold, twelve parts.
Silver, two parts.
Copper, four parts.

Mix. *Francis.*

Felt Splints.

Dissolve three pounds of shellac in two quarts of alcohol, in a tinned vessel, with a tight cover to prevent evaporation. Spread a piece of woollen cloth on a board, and with a clean brush saturate both sides of the cloth with the solution. Hang it up until thoroughly dried; then lay it again upon the board, and apply a second coat of the solution to one side only of the cloth. Dry again, and apply a third coat to the same side. While the last coat is yet fresh, fold the cloth so that the side having three coats shall be applied to itself. Then, with a hot flat-iron, smooth, and press the surfaces together. When cold, a slight rubbing with sand-paper makes it fit for use.

It becomes a firm, almost unyielding board; but exposure to a moderate heat will make it pliant, so that it can easily and accurately be adapted to any surface.

Dr. F. H. Hamilton.

Tracing Paper.

Paper brushed over with a thin varnish of colorless Damara resin, the varnish being allowed to soak through the paper without any apparent coating of it remaining on the surface. *Redwood.*

Varnishes.

Varnish for Coating Metals.

R. Copal,
Oil of rosemary, each, one part.
Alcohol, two to three parts.

Mix. It should be applied hot, and, when dry, it will be found very hard and durable.

Schindler.

Varnish for Leather.

R. Oil of turpentine, saturated with caoutchouc, six parts.
Copal,
Oil of rosemary, each, two parts.

Mix. This varnish should be applied somewhat fluid, and always dried at a high temperature. *Schindler.*

R. Alcohol, twenty gallons.
Shellac, thirty-five pounds.
Resin, twenty pounds.
White turpentine, ten pounds.
Powdered lampblack, four pounds.

Bruise the shellac and resin, put them in the alcohol, and stir ten or twelve times during the day, which will prevent the formation of lumps, and will nearly dissolve it in one day. Next day add the turpentine, and stir five or six times; the third day stir in the powdered and sifted lampblack.

No heat is employed. *E. S. Frey.*

Varnish for Furniture.

℞. Dissolve fused copal in oil of turpentine.

If the copal has not been kept a sufficient time in a state of fusion, the varnish made with it remains soft for some time after it is dry, and afterwards peels off. *Schindler.*

Amber Varnish.

℞. Amber, one pound.

Place it in an iron pot, and render it semi-fluid by heat; then add

Pale boiled oil, ten ounces.

Mix, remove from the fire, and add

Oil of turpentine, one pint.

Stir well together. *Cooley.*

Japan Varnish.

℞. Oil of turpentine, eight ounces.
" lavender, six ounces.
Camphor, one drachm.
Bruised copal, two ounces.

Mix, and dissolve. Used for japanning tin. *Cooley.*

Lac Varnish (Aqueous).

℞. Pale shellac, five ounces.
Borax, one ounce.
Water, one pint.

Digest at nearly the boiling point until dissolved; then strain. A good vehicle for water colors, inks, etc. *Cooley.*

Lac Varnish.

℞. Shellac, ninety parts.
Venice turpentine, four parts.
Alcohol, five hundred parts.

Digest until dissolved, and strain. *Gray.*

Copal Varnish.

A variety of methods is resorted to for making copal varnish. One of the cheapest is to dissolve copal in drying linseed oil, near the boiling point, and, when sufficiently cool, to dilute the mixture with oil of turpentine. *Cooley.*

DIETETIC PREPARATIONS.

NOT INCLUDED AMONG THE PREVIOUS PRESCRIPTIONS.

Tous les Mois.

This is a variety of arrowroot, prepared from the rhizomes of a species of *Canna*, and is to be employed in the same manner and in same cases as arrowroot.

Mucilage of Salep.

Salep is the prepared bulbs of several species of orchidaceous plants. It is more nutritive than arrowroot or sago, and hence is adapted for the convalescent, rather than for the sick. These roots are powdered with much difficulty. The mucilage is prepared by dissolving the powder in boiling water, constantly stirring, and adding to the solution sugar and milk. *Soubeiran* orders powdered salep, half an ounce, to be boiled with a sufficient quantity of water till dissolved, four ounces of sugar added, and to be aromatized according to taste.

Biscuit Jelly.

White biscuit, four ounces, to be boiled down in four pints of water, to one-half, strained, and evaporated to one pint; one pound of white sugar, four ounces of port wine, and one drachm of cinnamon water added, and the whole well mixed.

It has been found useful in debility of the digestive organs. *A. T. Thomson.*

Bread Jelly.

Cut a French roll into slices, toast these on both sides, and boil in a quart of water until the whole forms a jelly, adding more water if required; strain, and flavor.

This is nutritious, and may be made more so by using broth, wholly deprived of fat, instead of water. *Cooley.*

Panada.

Stale wheat bread, one ounce; cinnamon, one drachm; water, one pint. Cover up and let stand for an hour, beat up and boil for ten minutes, adding a little grated nutmeg and sugar. Wine may be added, if required. *Ellis.*

Compound Salep Powders.

Powdered salep, tragacanth, and sago, each, four ounces; cochineal, half a drachm; prepared oyster-shells, one ounce.

These are to be carefully mixed and divided into powders of one drachm each. Stir one of these into a pint of milk, and boil for ten or fifteen minutes. To be taken freely in diarrhœa and dysentery. *Ellis.*

These are known as *Castanello's powders*, for which the following is used as a substitute:—

Powdered gum Arabic, tragacanth, arrowroot, sago, and tapioca, each, two drachms. Mix them well together, boil in a pint of milk, flavored with nutmeg or cinnamon.

Used as a diet in dysentery, diarrhœa, etc.

Vegetable Broth.

Take two potatoes, one carrot, one turnip, and one onion.

Slice them, and boil in a quart of water for an hour, adding more water from time to time, so as to keep up the original quantity; flavor with salt, and a small portion of potherbs; strain. When advisable, a small quantity of mushroom catsup added to this broth greatly improves its taste.

A good substitute for animal food, when the last is inadmissible. *Ellis.*

Gloucester Jelly.

Rice, sago, pearl barley, hartshorn shavings, eryngium root, each, one ounce; boil in three pints of water to one pint, and strain.

This is very nutritive, dissolved in broth, milk, or wine. *A. T. Thomson.*

Almond Jelly.

Blanched sweet almonds and white sugar, each, one ounce; water, four ounces; make an emulsion; strain, and add melted hartshorn jelly, half a pound; orange-flower water, one drachm; and essence of lemon, two or three drops.

Cooley.

Boiled Flour.

Take of fine flour a pound, tie it up in a linen cloth as tight as possible, and after frequently dipping it into cold water, dredge the outside with flour, till a crust is formed round it, which will prevent the water soaking into it, whilst boiling.

Boil for a long time, and permit to cool, when it will become a hard, dry mass.

This is to be grated and prepared like arrowroot. A good diet for children, in diarrhœa, etc. *Ellis.*

Beef Tea.

Take of lean beef, cut into shreds, one pound; water, one quart.

Boil for twenty minutes, removing any scum that arises. When it has become cold, strain. *Ellis.*

Take half a pound of good rump steak, cut into thin slices, and spread these in a hollow dish; sprinkle a little salt over them, and pour upon the whole a pint of boiling water.

Cover the dish and place it near the fire for half an hour; then remove to a pan and boil for fifteen minutes; strain through a fine sieve.

The quantity of water is too small for the strength of the tea for invalids, but is sufficient to extract all the soluble parts of the beef, and the tea can be reduced to the proper strength by the addition of boiling water. *A. T. Thomson.*

Essence of Beef.

Take of lean beef, sliced, a sufficient quantity to fill the body of a porter bottle, cork up loosely, and place it in a pot of cold water, attaching the neck, by means of a string, to the handle of the pot.

Boil for an hour and a half to two hours, then decant the liquid and skim it.

To this preparation may be added spices, salt, wine, brandy, etc., according to the taste of the patient and nature of the disease. *Ellis.*

Mutton Tea.

Take one pound of good mutton, freed from the fat, and cut into thin slices; pour over it a pint and a half of boiling water, in the same manner as directed for beef tea; but it requires to be boiled for half an hour, previous to straining.

If the invalid desires the addition of barley, an ounce of clean pearl barley, washed, and macerated in boiling water for an hour, may be boiled with the mutton tea, and the undissolved barley separated by straining. *A. T. Thomson.*

Veal Tea.

This is to be made in the same manner as beef tea, using a pound of the fillet of veal, freed from fat and sliced, and a pint and a half of boiling water; boiling for half an hour. It may also be made with the same quantity of the fleshy part of a knuckle of veal. By boiling this latter down to one-half, and straining, the decoction will gelatinize, and, if poured into small cups, will keep good for several days.

By the addition of an equal quantity of boiling water to this jelly, it is fit for use in a few minutes. *A. T. Thomson.*

Chicken Water.

Take half a chicken, divested of all fat, and break the bones; add to this half a gallon of water.

Boil for half an hour, strain, and season with salt. *Ellis.*

Take a small chicken, free it from the skin, and from all the fat between the muscles; divide it longitudinally into halves; remove the lungs, liver, etc., then cut it, bones and muscles, into thin slices, and put these into a pan with a sufficient quantity of salt; add a quart of boiling water, cover the pan, and simmer slowly for two hours; strain through a fine sieve.

A. T. Thomson.

Calves'-Feet Jelly.

Take two calves' feet, and add to them one gallon of water, and boil down to one quart; strain, and when cold, remove all fat; then add the whites of six or eight eggs, well

beaten; a pint of wine, half a pound of loaf sugar, and the juice of four lemons, and mix well.

Boil for a few minutes, constantly stirring: then strain through a flannel bag. The wine may be omitted if necessary.
Ellis.

Toast Water.

Toast thoroughly a slice of stale bread, put it in a jug, and pour over it a quart of water which has been boiled and cooled, and in two hours decant; a small piece of orange or lemon-peel put into the jug with the bread, improves the flavor greatly.

This forms a good drink in febrile affections. *A. T. Thomson.*

Apple Water.

Slice two large apples, and pour over the slices a pint of boiling water.

Let stand for an hour, and decant; if necessary, sweeten with a little white sugar.
A. T. Thomson.

It is also prepared by boiling for an hour, ten ounces of sliced apple in two pints of water, and straining. *Soubeiran.*

Lemon-Peel Water.

Pare the rind of one lemon, which has been previously rubbed with half an ounce of refined loaf sugar, put the peeling and sugar into a jar, and pour over them a quart of boiling water. When cold, pour off the fluid, and add a tablespoonful of lemon juice.

If wine be not improper, a glass of sherry may be added, instead of the lemon juice.
A. T. Thomson.

Bran Tea.

Fresh wheat bran, one pound; water, three quarts.

Boil down to one quart, strain, and add sugar, honey, or molasses, according to the taste of the patient.

Chicken Panada.

Take the white meat of a boiled or roasted chicken, free it from the skin, and cut it into small morsels; pound these in a mortar with an equal quantity of stale bread, and a sufficiency of salt, adding gradually some of the water in which the chicken has been boiled, or some beef tea, until the whole forms a thin, fluid paste.

Put this into a pan, and boil for ten minutes, continually stirring.
A. T. Thomson.

Mutton Broth.

Take a pound of mutton, freed from fat, put it into a pan with three pints of water, and simmer for two hours. Take three carrots, the same number of turnips, peel, and cut them in slices, boil them for half an hour in a quart of water, throw them an a colander to drain off the water, and having boiled two onions sliced in a pint of water, and poured off the water, add the whole of these vegetables to the mutton liquor; after removing the meat, season with salt and a little celery seed.

Simmer slowly for four hours, put in the meat again, and continue to simmer for another hour. The meat may be served with the broth. A palatable and very nutritive dish for convalescents.
A. T. Thomson.

Fowl with Rice.

Free a young fowl from the skin and the fat on the exterior of the body, and simmer it in good beef tea, till it is very tender.

Season with salt, and, having boiled some rice, add it to the liquor before the fowl is dished. *A. T. Thomson.*

Water Souchy.

Take two small, fresh flounders, boil them in a quart of water to one-third, or long enough to reduce the fish to a pulp; strain the liquor through a sieve, and, having cut off the fins of four other small flounders, put the latter into the liquor, with a sufficiency of salt, a few grains of Cayenne pepper, and a small quantity of chopped parsley, and boil till the fish is perfectly done.

The fish and liquor are to be eaten together. Few dishes are more relished by convalescents from fever. *A. T. Thomson.*

Scale, gut, and wash two perch; put salt in the water; when it boils, put in the fish, with an onion cut into slices and separated into rings, and a handful of parsley picked and washed clean.

When the fish are done, put them in a soup-dish, and pour the liquor over them.

Hofland.

Mulled Wine.

Take a quarter of an ounce of bruised cinnamon, half a nutmeg, grated, and ten bruised cloves; infuse them in half a pint of boiling water for an hour, strain, and add half an ounce of white sugar.

Pour the whole into a pint of hot port or sherry wine.

A good cordial and restorative in the low stages of fever, or in the debility of convalescents from fevers.

A. T. Thomson.

Cold Custard.

Take the yolk and white of an egg, and a tablespoonful of sugar; beat together till the tenacity of the white of the egg is entirely destroyed; add gradually, constantly stirring, half a pint of cold water, two teaspoonfuls of rose-water, and a little grated nutmeg.

A wineglassful to be taken every two or three hours. *Dewees.*

Molasses Posset.

Put in a saucepan a pint of best molasses, a teaspoonful of powdered white ginger, and a quarter of a pound of fresh butter.

Simmer for half an hour, stirring frequently. Then stir in the juice of two lemons, or two tablespoonfuls of vinegar, cover the pan, and let it stand by the fire five minutes. *A. T. Thomson.*

Chicken Jelly.

Cut a chicken into small pieces, bruise the bones, and put the whole into a stone jar, with a cover that fits water-tight. Set the jar in a large kettle of boiling water, and keep it boiling for three hours.

Then strain, and season with salt, pepper, and mace, or with loaf sugar and lemon juice, according to circumstances and taste.

A. T. Thomson.

Chocolate.

Put milk and water on to boil; then scrape the chocolate fine, one or two squares to a pint, as will best suit the stomach; when the mixture of milk and water boils, take it off the fire, throw the chocolate into it, mill it well, and serve it up with the froth.

The sugar may be mixed with the scraped chocolate, or added afterwards. It should never be made before it is wanted, as heating it again injures the flavor, and causes a separation of the oil. *Cooley.*

Chocolate Milk.

Dissolve an ounce of scraped chocolate in a pint of boiling new milk.

Cooley.

Coffee Milk.

Boil a dessertspoonful of ground coffee in a pint of milk, for a quarter of an hour; then clear it with white of egg or isinglass, let it boil for a few minutes, and set it by the side of the fire to fine. Sweeten according to taste.

This is a suitable breakfast for those of spare habit, and disposed to affections of the lungs. *Cooley.*

Rice Custard.

Boil half a cupful of the best ground rice in a pint of milk, until dissolved; then mix it with a quart of cream; flavor with nutmeg, mace, and a little brandy.

Cooley.

Frumenty.

Bruised wheat, boiled in water until quite soft; drain, thin with milk, sweeten, and flavor according to taste.

The bruised wheat boiled to a paste, and, when cold, eaten with milk, in the evening, for some time, will often relieve costiveness.

Ginger Beer.

Take of white sugar, three pounds; bruised ginger, two ounces; cream of tartar, one ounce; lemons, sliced, four; boiling water, four gallons; yeast, eight ounces.

Pour the water on the four first-named ingredients, and infuse for two hours; then strain, add the yeast, and, when fermentation has continued for some hours, put into stone bottles and tie down the corks.

Gray.

Spruce Beer.

Take of sugar, six pounds; essence of spruce, four ounces; boiling water, ten gallons; yeast, eight ounces.

Add the water to the sugar and essence, ferment with the yeast, and bottle in the same way as ginger beer. *Gray.*

Molasses Beer.

Take of molasses, fourteen pounds; hops, a pound and a half; water, thirty-six gallons; yeast, a pound.

Boil the hops in the water, add the molasses, and ferment. *Gray.*

Caudle.

Into a pint of thin gruel, put, while it is boiling hot, the yolk of an egg, beaten with sugar, and mixed with a tablespoonful of cold water, a glass of wine, and some nutmeg.

Mix well together.

A nourishing, restorative mixture, given during convalescence. *Gray.*

Barley Mixture.

Take of pearl barley, sliced figs, stoned raisins, each, two ounces and a half; liquorice root, sliced and bruised, five drachms; water, five pints and a half.

Clean the barley by washing, boil it in four and a half pints of the water down to two pints; add the figs, raisins, and liquorice root, with the remaining pint of water; boil down to two pints, and strain.

This is nutritive and demulcent. *Gray.*

Artificial Asses' Milk.

Boil together a pint of water and an ounce of hartshorn shavings, until reduced to a jelly; add two ounces of white sugar; when cold, mix with a pint of new milk, and a teaspoonful of syrup of Tolu.

To be taken freely, as a nutritive beverage. *Cooley.*

Isinglass Blancmange.

Isinglass, a quarter of a pound; rose water, half a pint; milk, two quarts; milk of almonds, half a pint.

Boil to a proper consistence, and permit to cool. *Hoffmann.*

Rice Blancmange.

Ground rice, two ounces; milk, one pint; lump sugar, three ounces; a little lemon-peel and cinnamon.

Dissolve the rice in the milk, by boiling, reduce it to a proper consistence, then add the spice and sugar; boil for a few minutes, strain, and let cool. The rice should be rubbed up with a little water, before adding it to the milk, to prevent it from being in lumps. *Cooley.*

Soda Cakes.

Flour, one pound; bicarbonate of sodium, a quarter of an ounce; sugar and butter, each, half a pound; make a paste with milk; add candied orange, lemon, or citron, or the fresh peel, grated, according to taste.

They may be made with the same quantity of carbonate of magnesium, instead of the soda, and the candied peel omitted. In dyspepsia, with acidity. *Cooley.*

LIST OF INCOMPATIBLES.

A COMPLETE list of all the incompatibles to each medicinal agent would swell the catalogue to an inordinate degree. The following is only intended to present the chief incompatibles.

It should also be borne in mind that clinical experiments have not yet been sufficiently numerous, to determine whether the substances capable of producing precipitation in vegetable solutions, are really incompatible with the active medicinal principles of the plants in question.

ABSINTHIUM, with sulphates of iron and zinc, acetates of lead, nitrate of silver, tartar emetic.

ACACIA, with Goulard's extract, alcohol, nitric acid, tincture of chloride of iron.

ACIDUM ACETICUM, with alkalies, alkaline and earthy carbonates.

ACIDUM CITRICUM, with acetates of lead, nitrate and acetate of mercury, alkalies, alkaline and earthy sulphurets, and carbonates.

ACIDUM ARSENIOSUM, with magnesia, lime water, alkaline and earthy sulphurets, hydrated peroxide of iron, astringent vegetable infusions and decoctions.

ACIDUM GALLICUM, with lime water, alkaline carbonates, acetate of lead, salts of copper, nitrate of silver, iodide of iron, sulphate of iron, tartar emetic, solution of opium, etc.

ACIDUM HYDROCYANICUM, with mineral acids, metallic oxides, chlorine, etc.

ACIDUM MURIATICUM, with alkalies and their carbonates, alkaline earths, metallic oxides and carbonates, sulphuret and tartrate of potassium, salts of silver, lead, and mercury.

ACIDUM NITRICUM, with the metallic oxides, the carbonates, the salifiable bases, the essential oils, etc.

ACIDUM NITRO-MURIATICUM, with oxides, earths, and alkalies, the sulphurets, etc.

ACIDUM PHOSPHORICUM, with the soluble salts of calcium, barium, and lead.

ACIDUM SULPHURICUM, with the earths, alkalies, and their carbonates, the sulphurets, etc.

ACIDUM TANNICUM, with per salts of iron, albumen, gelatin, alkalies, alkaline earths, and carbonates, tartar emetic, acetate of lead, vegetable alkaloids, etc.

ACIDUM TARTARICUM, with alkalies and their carbonates, and the alkaline earths and carbonates.

ÆTHER HYPONITROSUS, with alcoholic solution of caustic potassa.

ÆTHER MURIATICUS, with solution of caustic potassa.

ALUMEN, with the alkalies and alkaline carbonates, lime, magnesia, acetate of lead, infusion of galls, etc.

AMMONIA, with acids, mineral salts, alum, etc.

Ammonii Acetas, with alkalies, strong acids, corrosive sublimate, nitrate of silver, alkaline earths, salts of quinia, etc.

Ammonii Carbonas, with acids, caustic potassa and soda, magnesia, alum, chloride of calcium, bitartrate and bisulphate of potassium, the salts of iron, bichloride of mercury, salts of lead, of zinc, etc.

Ammonii Chloridum, with sulphuric and nitric acids, salts of lead and silver, potassa, soda, their carbonates, lime, etc.

Angustura, with sulphates of iron and copper, nitrate of silver, tartar emetic, acetates of lead, bichloride of mercury, potassa, infusion of galls, etc.

Anthemis, with solution of gelatin, infusions containing gallic acid, salts of iron, nitrate of silver, salts of lead, bichloride of mercury, etc.

Antimonii Sulphuretum, with nitric and nitro-muriatic acids.

Antimonii et Potassii Tartras, with alkalies and earths, and their carbonates, strong acids, sulphurets, lime water, chloride of calcium, salts of lead, soaps, infusions containing gallic acid, rhubarb, etc.

Armoracia, with carbonates of the alkalies, bichloride of mercury, nitrate of silver, vegetable bitters and astringents, etc.

Argenti Nitras, with the fixed alkalies, muriatic and arsenious acids, and their salts, lime, the phosphates, acetates, iodides, bromides, chlorides, and sulphurets, astringent vegetable infusions, etc.

Arnica, with sulphates of iron and zinc, acetate of lead, mineral acids, etc.

Aurantii Cortex, with infusion of bark, sulphate of iron, lime water, etc.

Barii Chloridum, with the alkaline and earthy carbonates, alum, nitrate of silver, etc.

Benzoinum, with the acids and alkalies.

Bistorta, with salts of iron, gelatin, etc.

Belladonna, with caustic alkaline solutions, tannin, vegetable astringents, etc.

Bismuthi Nitras, with the alkalies, vegetable astringents, etc.

Calamus, with acetate of lead.

Calcii Carbonas, with the acids and acidulous salts, alum, chloride of ammonium.

Calcii Chloridum Liquor, with the soluble sulphates and carbonates, carbonate of magnesium, etc.

Calcis Liquor, with the mineral and acetic, phosphoric, tartaric, and citric acids, chloride of ammonium, the alkaline carbonates, soap, the vegetable astringents, alum, sulphates of iron and zinc, sulphate of magnesium, chlorides of mercury, nitrate of silver.

Calumba, with ammonia, lime water, mineral acids, chloride of iron, nitrate of silver, acetate of lead.

Capsicum, with corrosive sublimate, acetate of lead, nitrate of silver, sulphates of iron, zinc, and copper, carbonates of the alkalies.

Cardamomum, with the acids, sulphate of iron, bichloride of mercury, etc.

Caryophyllus, with tartar emetic, sulphates of iron and zinc, etc.

Cascarilla, with lime water, sulphates of iron and zinc, infusions containing tannic or gallic acid.

Cassia Fistula, with alcohol.

Catechu, with alkalies, the salts of iron, gelatin, etc.

Cinchona, with strong acids, alkalies, sulphates of iron and zinc, nitrate of silver, tartar emetic, lime, magnesia, etc.

Coccus, with acetate of lead, sulphates of zinc and iron.

Colchicum, with acids, which render the vinous tincture drastic; alkalies, on the contrary, render it milder in its operation.

Colocynthis, with fixed alkalies, sulphate of iron, nitrate of silver, acetate of lead, etc.

Conium, with the strong acids, alkalies, tannin, etc.

Contrayerva (tincture), with water.

Copaiba, with the mineral acids.

Coptis Trifolia, with nitrate of silver, and acetate of lead.

Creta Præparata, with acids and acidulous salts, alum, chloride of ammonium.

Cuprum Ammoniatum, with acids, potassa and soda, lime water.

Cupri Sulphas, with fixed alkalies, ammonia, the carbonates, bichloride of mercury, arsenite of potassium, nitrate of silver, acetate of lead, vegetable infusions, etc.

Cydonia, with acids, most metallic salts, alcohol.

Digitalis, with sulphate of iron, infusion of Peruvian bark, acetate of lead, tannin, and vegetable astringents.

Ferrum Ammoniatum, with acids, the fixed alkalies, lime water, astringent infusions.

Ferri Iodidum, with fixed alkalies, lime water, vegetable astringents, etc.

Ferri et Potassii Tartras, with the mineral acids, alkalies, vegetable astringents.

Ferri Subcarbonas, with the mineral acids, acidulous salts, etc.

Ferri Chloridum, with alkalies and their carbonates, lime water, carbonate of calcium, magnesium, and its carbonate, solution of gum, vegetable astringents.

Ferri Sulphas, with nitric acid, fixed alkalies, and their carbonates, lime water, nitrates of potassium and of silver, borate of sodium, acetate of lead, iodide of potassium, vegetable astringents, etc.

Galla, with alkalies, the carbonates of the alkalies, lime water, salts of iron, zinc, lead, bismuth, tartar emetic, bichloride of mercury, gelatin, vegetable alkaloids, etc.

Guaiaci Tinctura, with water, the mineral acids, spirit of nitrous ether, earthy and metallic salts, etc.

Granatum (*Cortex*), with sulphate of iron, etc.

Hæmatoxylon, with mineral acids, alum, sulphates of iron and copper, tartar emetic, acetate of lead.

Hydrargyrum Ammoniatum, with muriatic and other acids, the fixed alkalies, and protochloride of tin.

Hydrargyri Chloridum mite, with the alkalies, lime, chlorides, and carbonates of the alkalies, nitric acid, salts of iron, lead, and copper, iodide of potassium, soaps, etc.

Hydrargyri Chloridum Corrosivum, with alkalies and lime, and their carbonates, tartar emetic, sulphuret of potassium, soap, iron, copper, lead, and their salts, nitrate of silver, albumen, gelatin, gluten, milk, vegetable astringents, fixed oils, etc.

Hydrargyri Oxidum Rubrum, with the mineral and vegetable acids.

Hydrargyri Oxidum Nigrum, with the mineral and vegetable acids.

Hydrargyri Iodidum, with the mineral acids, soluble chlorides, and iodides.

Hydrargyri Iodidum Rubrum, with the mineral acids, iodides, and chlorides.

HYDRARGYRUM CUM CRETA, with the mineral and organic acids, acidulous salts, alum, etc.

HYOSCYAMUS, with acetate of lead, nitrate of silver, sulphate of iron, tannin, and the vegetable astringents.

IODINIUM, with starch, alkalies, and alkaline earths.

IPECACUANHA, with the vegetable astringents, acetate of lead, etc.

KINO, with the salts of iron, acetate of lead, the mineral acids, gelatin, tartar emetic, etc.

KRAMERIA, with salts of iron, acetate of lead, gelatin, mineral acids, etc.

MAGNESIA, with acids and acidulous salts, chloride of ammonium, metallic salts.

MAGNESII CARBONAS, with acids and acidulous salts, metallic salts, lime water, chloride of ammonium, bitartrate of potassium.

MAGNESII SULPHAS, with ammonia, acetate of lead, chloride of calcium, lime water, potassa and soda, and their carbonates, etc.

MENTHA, with sulphate of iron, nitrate of silver, acetate of lead, etc.

MORPHIÆ ACETAS, with alkaline carbonates, ammonia, vegetable astringents, all articles incompatible with infusion of opium, except acetate of lead.

MORPHIÆ MURIAS, with acetate of lead, tannin, ammonia, alkaline carbonates, etc.

MOSCHUS, with mineral acids, bichloride of mercury, sulphate of iron, nitrate of silver, infusion of bark, etc.

OPIUM, with alkalies and their carbonates, nitrate of silver, acetate of lead, salts of copper, iron, and zinc, astringent infusions, etc.

POTASSA, with acids and acidulous salts, earthy and metallic salts, salts of ammonium, etc.

POTASSII ACETAS, with mineral acids, sulphates of sodium and magnesium, tartaric acid, most metallic and earthy salts, except the acetates, etc.

POTASSII ARSENITIS, LIQUOR, with lime water, acids, chlorides of iron and calcium, sulphate of magnesium, alum, sulphates of iron and copper, iodide of iron, nitrate of silver, vegetable astringents.

POTASSII BITARTRAS, with strong acids, lime water, ammonia, the alkaline carbonates, magnesia, sulphate and carbonate of magnesium, etc.

POTASSII BROMIDUM, with acid and acidulous salts, except bitartrate of potassium, with the salts of lead, silver, and mercury, etc.

POTASSII CARBONAS, with acids, metallic salts, lime water, sulphate of magnesium, salts of ammonium, alum, calomel, etc.

POTASSII CITRAS, with salts of calcium, lead, and silver, sulphuric and other acids.

POTASSII IODIDUM, with acetate of lead, bichloride of mercury, tartaric acid, metallic salts, all acids and acidulous salts, except bitartrate of potassium.

POTASSII NITRAS, with alum, sulphate of magnesium, metallic sulphates, sulphuric acid, muriatic acid (when heated), tartaric acid.

POTASSII SULPHAS, with tartaric acid, acetate of lead, chloride of calcium, bichloride of mercury, nitrate of silver, etc.

POTASSII SULPHURETUM, with acids and most metallic salts.

POTASSII TARTRAS, with most acids, lime water, acetate of lead, nitrate of silver, chloride of calcium.

Pimenta, with alum, ammonia, alkaline carbonates, salts of iron, copper, zinc, and silver, vegetable astringents.

Piper Nigrum, with vegetable astringents.

Plumbi Acetas, with the alkalies and their carbonates, the mineral and vegetable acids (except acetic acid), the tartrates and bitartrates, alkaline and metallic sulphates and chlorides, alum, borax, lime water, vegetable astringents, infusion of opium, the soaps, milk.

Plumbi Iodidum, with solution of potassa, sulphuric acid.

Quassia, with nitrate of silver, acetate of lead, etc.

Quiniæ Sulphas, with tartrate of potassium, alkalies and their carbonates, lime water, infusion of galls.

Rheum, with strong acids, lime water, sulphates of iron and zinc, tartar emetic, bichloride of mercury.

Rosa Gallica, with sulphates of iron and zinc, gelatin, lime water.

Salix, with lime water, sulphate of iron, alkaline carbonates, solution of isinglass.

Salvia, with salts of iron.

Sapo (*and liniments, etc., containing it*), with sulphates of calcium and magnesium, chloride of calcium, alum, metallic salts, lime water.

Sarsaparilla, with infusion of galls, lime water, acetate of lead.

Scilla, with lime water, alkaline carbonates, nitrate of silver, acetate of lead, etc.

Senna, with strong acids, carbonates of the alkalies, lime water, tartar emetic.

Serpentaria, with acetate of lead.

Sodii Carbonas, with acids, bitartrate of potassium, acidulous, metallic, and earthy salts, lime water.

Sodii Phosphas, with mineral acids, lime, magnesia, earthy and metallic salts.

Sodii Sulphas, with salts precipitated by sulphuric acid, carbonates of potassium, acetate of potassium.

Sodii et Potassii Tartras, with most acids and acidulous salts, acetate of lead, nitrate of silver.

Spiritus Ætheris Nitrosi, with sulphate of iron, tincture of guaiacum, alkaline and earthy carbonates, especially those with an excess of acid.

Tamarindus, with the salts of potassium, the alkaline carbonates, lime water, tartar emetic.

Taraxacum, with corrosive sublimate, sulphate of iron, nitrate of silver, acetate of lead, infusion of galls, etc.

Thea, with salts of iron, gelatin, lime water, etc.

Tormentilla, with solution of isinglass, salts of iron, alkalies, etc.

Tragacanth, with sulphates of iron and copper, acetate of lead, alcohol, etc.

Ulmus, with alcoholic tinctures, if added in quantity.

Uva Ursi, with salts of iron, gelatin, tartar emetic.

Zinci Oxidum, with acids, acidulous salts, potassa, soda, and ammonia.

Zinci Sulphas, with potassa, soda, and ammonia, and their carbonates, the sulphurets, milk, mucilages, astringent vegetable infusions, etc.

POSOLOGICAL TABLE

OF THE

MOST IMPORTANT MEDICINES.

Absinthium, Infusion, f℥j to ij.
Extract, grs. x to xx.
Tincture, gtt. xx to f℥ij.
Oil, gtt. ij to iv.
Acetosella, Extract, ℈j to ℥ss.
Acidum Arseniosum, gr. $\frac{1}{16}$ to $\frac{1}{8}$.
Benzoicum, grs. x to xx.
Boracicum, grs. v to xx.
Carbolicum, grs. j to iij.
Gallicum, grs. ij to x.
Hydrocyanicum (medicinal), gtt. j to ij.
Hydriodicum, gtt. v to x.
Lacticum, ℈j to ij.
Muriaticum, gtt. v to x.
dilut. gtt. xx to xxx.
Nitricum, gtt. ij to vj.
dilut. gtt. xx to xxx.
Nitromuriaticum, gtt. ij to iv.
dilutum, ♏ x to xv.
Phosphoricum, dilut. gtt. x to f℥j.
Sulphuricum, gtt. ij to v.
dilut. gtt. x to xxx.
aromatic. gtt. v to xx.
Tannicum, grs. j to iij.
Tartaricum, grs. x to xxx.
Aconitum, Powder, grs. j to ij.
Extract, gr. j.
alcoholic, gr. $\frac{1}{6}$ to $\frac{1}{2}$.
of root, gr. $\frac{1}{8}$ to $\frac{1}{3}$.
Root, gr. ss to j.
Tincture of root, gtt. v to vj.
Tincture of leaves, gtt. x to xv.
Æther, Acetic, gtt. x to f℥j.
Hyponitrosus, gtt. x to lx.
Nitrous, spirit of, f℥ss to ij.
Hydrocyanic, gtt. ij to iij.
Muriatic, gtt. xxx to lx.
Sulphuric, f℥ss to j.
spirit, f℥j to iij.
compound, f℥ss to ij.
Allium, Syrup, f℥j.
Aloe, Powder, gr. iij to x.
and Canella, grs. v to xx.
Wine, f℥j to f℥ss.
Tincture, f℥j to f℥ss.
and Myrrh, f℥ss to ij.
Alumen, grs. v to xx.
Ammonia, Water, gtt. v to xx.
Tincture comp., gtt. x to xl.
Spirit of, gtt. v to xx.
aromatic, ♏ xx to lx.
Ammonium, Acetate, Solution of, f℥ss to j.
Bromide, grs. v to x.
Carbonate, grs. v to x.
Chloride, grs. v to xv.
Citrate, Solution of, f℥ss to j.
Hydrosulphate, gtt. v to vj.
Iodide, gr. j to v.
Nitrate, ℈ss to j.
Phosphate, grs. x to xl.
Succinate, Spirit, gtt. xx to l.
Sulphate, ℈j to ℥ss.
Valerianate, grs. ij to viij.
Ammoniacum, grs. v to xv.
mixture, f℥ss to j.
Amylum, Iodide, ℥ss to j.
Angelica, Tincture, f℥j to ij.
Angustura, Powder, grs. x to ℈j.
Infusion, f℥ij.
Tincture, f℥j to ij.
Anthemis, Infusion, f℥j to ij.
Extract, grs. x to xx.
Syrup, f℥ss.
Anthracokali, grs. ij to iv.
Antimonium, oxide, grs. i to iv.
Sulphuret, grs. v to x.
precipitated, grs. j to iij.
Kermes mineral, gr. $\frac{1}{2}$ to x.
Potassium, Tartrate of, gr. $\frac{1}{6}$ to j.
Wine, gtt. xxx to f℥j.

Antimonium, Powder, grs. iij to
Apocynum, Decoction, f℥j to ij.
Extract, grs. iij to v.
Argentum, Chloride, gr. $\frac{1}{10}$ to ij.
and Ammonia, gr. $\frac{1}{14}$ to $\frac{1}{10}$.
Cyanide, gr. $\frac{1}{12}$ to $\frac{1}{8}$.
Iodide, gr. $\frac{1}{2}$ to j.
Nitrate, gr. $\frac{1}{4}$ to ij.
Oxide, gr. $\frac{1}{4}$ to ij.
Armoracia, Infusion, f℥j to ij.
Spirit comp. f℥j to iv.
Arnica, Powder, grs. v to x.
Extract, grs. v to x.
Infusion, f℥ss to j.
Tincture, gtt. xxx to l.
Arsenicum, Iodide, gr. $\frac{1}{10}$ to $\frac{1}{5}$.
Donovan's Solution, gtt. v to xx.
Arum, Powder, grs. x.
Asclepias Tuberosa, Infusion, f℥iij to iv.
Asparagus, Extract, ℈j to ℥j.
Syrup, ℥j to ij.
Assafœtida, grs. ij to x.
Mixture, f℥ss to j.
Tincture, f℥j.
ammoniated, gtt. v to f℥j.
Atropia, gr. $\frac{1}{30}$.
Aurum, gr. $\frac{1}{4}$ to j.
Chloride, gr. $\frac{1}{20}$ to $\frac{1}{16}$.
Sodium et, Chloride, gr. $\frac{1}{20}$ to $\frac{1}{10}$.
Cyanide, gr. $\frac{1}{18}$ to $\frac{1}{10}$.
Iodide, gr. $\frac{1}{20}$ to $\frac{1}{10}$.
Oxide, gr. $\frac{1}{10}$ to $\frac{1}{4}$.
Azederach, Decoction, f℥ss to j.

Ballota Lanata, Decoction, f℥j to ij.
Balsamum Peruvianum, f℥ss.
Balsamum Tolutanum, gr. x to xxx.
Syrup, f℥ss.
Tincture, f℥j.
Baptisia Tinctoria, Decoction, f℥ss.
Barium, Chloride, Solution, gtt. v.
Iodide, gr. $\frac{1}{8}$.
Bebeerina, Sulphate, grs. v to ℈j.
Belladonna, gr. j to ij.
Extract, gr. $\frac{1}{2}$ to j.
alcoholic, gr. $\frac{1}{2}$ to j.
Syrup, ℥j to ij.
Tincture, gtt. xv to xxx.
Benzoin, Compound Tincture, gtt. x to xx.
Bismuthum, Subcarbonate, grs. ij to x.
Subnitrate, grs. ij to x.
Tannate, grs. x to xxx.
Valerianate, gr. j to v.
Bistort, Infusion, f℥j to ij.
Boletus Laricis, gr. j to iij.
Brayera, ℥ij to iv.
Brominium, Solution, gtt. v to x.
Brucia, gr. $\frac{1}{8}$ to $\frac{1}{2}$.
Tincture, gtt. v to xx.
Buchu, gr. xx to xxx.
Fluid Extract, ♏ xv to xxx.
Infusion, f℥ij.

Cahinca, ℈j to ℥j.
Calamus, Infusion, f℥j to ij.
Powder, ℈j to iij.
Calcium, Bromide, grs. x to xxx.
Chloride, solution, gtt. xx to xxx.
Carbonate, grs. x to xxx.
Hypophosphite, grs. ij to xv.
Iodide, grs. ij to iij.
Phosphate, ℈j to jss.
Calx. Lime water, f℥ss to ij.
Calendula, Extract, grs. ij to v.
Calomel, as an alterative, gr. $\frac{1}{10}$ to $\frac{1}{2}$.
as a purgative, grs. v to xij.
Calotropis, Infusion, f℥j to f℥j.
Powder, grs. iij to xx.
Calumba, Powder, grs. x to xxx.
Infusion, f℥ij.
Tincture, f℥j to iv.
Extract, grs. j to v.
fluid, ♏ x to xxx.
Camphora, grs. iij to x.
Water, f℥ss to j.
Tincture, gtt. v to xx.
Monobromated, grs. ij to v.
Canella, grs. x to ℈j.
Cannabis, Extract, gr. $\frac{1}{3}$ to v.
Tincture, gtt. x to xl.
Cantharis, gr. $\frac{1}{2}$ to j.
Tincture, gtt. xx to f℥j.
Capsicum, grs. v to x.
Infusion, f℥ss.
Tincture, f℥ss to ij.
Carbo Animalis, grs. x to xx.
Ligni, ℥ss to j.
Mineralis (Athracokali), grs. ij to iv.
Cardamomum, Tincture, f℥j to ij.
Carota, Infusion, seeds, f℥ij to iv.
Carum, Spirit, f℥j to ij.
Caryophyllus, Powder, grs. v to x.
Infusion, f℥j to ij.
Tincture, f℥j to ij.
Oil, gtt. ij to v.
Cascarilla Powder, ℈j to ℥ss.
Infusion, f℥j to ij.
Extract, grs. x to xx.
Tincture, f℥j.

Cassia Fistula, ℥ij to ℥ss.
Castanea, fluid extract, f℥ss to j.
Castoreum, grs. v to xx.
  Tincture, gtt. xxx to f℥ij.
Catalpa, Decoction, f℥ij to iij.
Catechu, grs. x to ℈j.
  Infusion, comp. f℥j to iij.
  Tincture, gtt. xxx to f℥iij.
Centaurea Benedicta, ℈j to ℥j.
  Infusion, f℥j to ij.
Centaurium, extract, grs. v to xx.
Cerium, oxalate, gr. j to iij.
Cetraria, ℥ss to j.
  Decoction, f℥ij.
Cetrarine, grs. ij to v.
Chelidonium, Extract, grs. v to xv.
Chenopodium, Juice, f℥ss.
  Oil, gtt. iv to x.
Chimaphila, Decoction, f℥ij to iv.
  Extract, grs. x to xxx.
  Fluid extract, f℥ss to j.
Chiretta, ℈j.
  Infusion, f℥j to ij.
  Tincture, f℥ss to ij.
Chlorinium, Water, f℥j to iv.
Chloroformum, gtt. v to xx.
Cimicifuga, Decoction, f℥j to ij.
  Fluid extract, ♏x to xxx.
  Tincture, gtt. xx.
Cinchona, Powder, ℥ss to j.
  Extract, grs. x to xxx.
  Fluid extract, f℥ss to j.
  Decoction, f℥j.
  Infusion, f℥ij.
  Tincture, f℥j to iv.
    compound, f℥j to iv.
Cinchonia, grs. ij to x.
  Sulphate, gr. ij to x.
Cinnamomum, Powder, grs. x to ℈j.
    comp. grs. x to xxx.
  Oil, gtt. j to iij.
  Tincture, f℥j to iv.
  Water, f℥ss.
Codeia, grs. ss to ij.
  and Morphia, Muriate, gr. ¼ to ½.
Coffeina, gr. j to iij.
Colchicum, Powder, grs. ij to viij.
  Extract, bulb, gr. j to ij.
  Fluid extract, ♏ij to x.
  Wine, root, gtt. x to xx.
    seeds, f℥j.
  Tincture, seeds, f℥ss to ij.
Colocynthis, Powder, grs. v to x.
  Extract, gr. ss to j.
    comp. grs. v to xv.
Conium, Powder, grs. iij to v.
Conium, Extract, gr. j. to ij.
    alcoholic, gr. j to ij.
  Fluid extract of fruit, ♏iij to v.
  Tincture, gtt. xx to f℥j.
Contrayerva, Powder, ℥ss.
  Extract, ℈j.
  Tincture, gtt. xxx to xl.
Copaiba, grs. xx to ℥j.
  Tincture, gtt. xxx to f℥j.
  Oil, gtt. x to xxx.
Coptis, Powder, grs. x to xxx.
  Infusion, f℥ss to ij.
  Tincture, f℥j to iij.
Coriander, ℈j to iij.
Cornus, Powder, ℈j to ℥j.
  Fluid extract, f℥j.
Creasotum, gtt. j to ij.
Crocus, grs. x to xxx.
Cubeba, Powder, grs. xx to ℥iij.
  Tincture, f℥j to ij.
  Oil, gtt. v to x.
  Oleoresin, ♏v to xx.
  Fluid extract, f℥j.
Cupri sulphas (as emetic), gr. j to iij.
Cuprum Ammoniatum, gr. ¼ to ½.
Cypripedium, grs. x to xx.

Delphinium, Tincture, gtt. x to xx.
Delphinia, gr. ¼ to ⅓.
Digitalis, Powder, gr. ½ to iv.
  Extract, gr. ss to ij.
  Fluid extract, ♏j to iv.
  Infusion, f℥ss.
  Tincture, gtt. x to xx.
Digitalinum, gr. $\frac{1}{60}$ to $\frac{1}{20}$.
Diospyros, Infusion, f℥j.
Dulcamara, Powder, grs. xxx to ℥j.
  Decoction, f℥j to ij.
  Extract, grs. v to x.
  Fluid extract, f℥ss to j.

Elaterium (common), gr. j to ij.
  Clutterbuck's, gr. ⅛ to ¼.
Elaterinum, gr. $\frac{1}{10}$.
  Tincture, gtt. xx to xl.
Emetia (impure), gr. $\frac{1}{16}$ to j.
  Syrup, f℥j.
Ergota, Powder, grs. x to xxx.
  Infusion, f℥j.
  Wine, f℥ij to iij.
  Tincture, gtt. xx to f℥j.
  Extract (Ergotine), gr. ij.
  Fluid extract, ♏x to xxx.
  Oil, gtt. xx to l.
Erigeron Annuum, Infusion, f℥ij to iv.

Erigeron Canadense, infusion, f℥ij to iv.
Extract, grs. v to x.
Oil, gtt. iv to x.
Eupatorium, Powder, grs. xx to xxx.
Infusion, f℥j.
Euphorbia Corollata, Powder, grs. x. to xx.
Ipecacuanha, Powder, grs. x to xv.
Hypericifolia, Infusion, f℥ss to ij.
Lathyris, Oil, gtt. iv to xij.

Ferrum, Ammoniated, grs. iv to xij.
Tincture, gtt. xl to f℥j.
Ferri Pulvis, grs. ij to x.
Ferrum, Acetate, gtt. x to xxv.
Tincture, gtt. xxx to f℥j.
Arseniate, gr. $\frac{1}{16}$ to $\frac{1}{2}$.
Bromidum, gr. j to iij.
Carbonate, grs. x to ℥ij.
Saccharine, grs. x to xx.
Carburet, grs. v to xv.
Chloride, gr. j to ij.
Tincture, gtt. x to xxx.
Citrate, grs. iv to viij.
and Quinia, grs. v to x.
and Strychnia, grs. ij to vj.
Ferrocyanide, grs. iij to v.
Iodide, grs. ij to iij.
Syrup, gtt. x to f℥ss.
Syrup (Lond.), f℥ss to j.
Lactate, grs. ij to iv.
Malate, Extract, grs. v to ℈j.
Nitrate, Solution, gtt. vj to xij.
Oxalate, gr. j to iij.
Oxide, black, grs. v to xx.
Red, grs. v to xv.
Saccharated, grs. x to xx.
Phosphate, grs. v to x.
Pyrophosphate, grs. ij to x.
Sulphate, grs. ij to v.
dried, gr. j to iij.
Tartrate, grs. v to x.
Wine, f℥j.
Ammonio, grs. v.
Tannate, grs. ij to iij.
Valerianate, gr. j to ij.
Wine, f℥ss to j.
Filix Mas, ℥j to ij.
Oleoresin, grs. xv to xx.
Frasera, Powder, grs. xxx to ℥j.
Infusion, f℥j to ij.
Fuligo, Tincture, gtt. xxx to f℥j.
Fuligokali, grs. ij to iij.

Galbanum, grs. x to xx.

Galla, Powder, grs. v to xxx.
Infusion, f℥j to ij.
Tincture, f℥j to iij.
Syrup, f℥ss.
Gambogia, gr. j to vj.
Solution, alkaline, gtt. xv.
Gaultheria, Oil, gtt. ij to x.
Gelsemium, grs. iij to x.
Fluid extract, ♏ ij to v.
Tincture, gtt. xx to xl.
Gentiana, Powder, grs. x to xl.
Extract, grs. x to ℈j.
Fluid extract, ♏ x to xxx.
Infusion, f℥j.
Tincture, comp., f℥j to ij.
Geranium, grs. x to xxx.
Extract, grs. x to xx.
Fluid extract, ♏ x to xxx.
Geoffroya, ℈j to ℥ss.
Decoction, f℥j to ij.
Gillenia, grs. xx to xxx.
Glycerina, f℥ss to ij.
Gossypium, bark of root, ℈j to ij.
Fluid extract, ♏ x to xxx.
Granatum, Decoction (rind), f℥j.
(bark), f℥ij to iv.
Gratiola, Wine, f℥j.
Guaiacum, Resin, grs. x to ℈j.
Wood, decoction, f℥j to ij.
Tincture, f℥j to ij.
Ammoniated, f℥j to ij.
Guarana, grs. x to xx.

Hæmatoxylon, Infusion, f℥ss to ij.
Decoction, f℥ss to ij.
Extract, grs. x to xxx.
Hedeoma, Oil, gtt. ij to x.
Helleborus, Powder, grs. x to ℈j.
Extract, grs. v to xv.
Tincture, gtt. xxx to f℥j.
Hemidesmus, Syrup, f℥j.
Hippocastanum, Powder, ℈j to iv.
Humulus, Infusion, f℥j to ij.
Tincture, f℥j to iij.
Hydrargyrum,
with Antimony, gr. j to iv.
with Chalk, grs. v to ℈j.
with Magnesia, grs. v to ℈j.
Blue pill, grs. v to x.
Acetate, gr. j.
Borate, grs. ij.
Bromide, gr. j to v.
Bibromide, gr. $\frac{1}{20}$ to $\frac{1}{10}$.
Chloride, Corrosive, gr. $\frac{1}{16}$ to $\frac{1}{4}$.
Mild, as an alterative, gr. $\frac{1}{10}$ to $\frac{1}{2}$.

Hydrargyrum, Chloride, Mild, as a purgative, grs. v to xij.
Cyanide, gr. $\frac{1}{16}$ to $\frac{1}{8}$.
Iodide, Green, gr. $\frac{1}{4}$ to j.
Red, gr. $\frac{1}{16}$ to $\frac{1}{10}$.
Nitrate, gr. $\frac{1}{4}$ to j.
Oxide, Black, gr. j to ij.
Red, gr. $\frac{1}{2}$ to j.
Phosphate, gr. $\frac{1}{2}$ to j.
Sulphate, gr. $\frac{1}{4}$ to v.
Sulphuret, Black, grs. v to x.
Red, grs. x to xv.
Tartrate, gr. j to ij.
Hydrastis, grs. x to xx.
Fluid extract, ♏x to xx.
Hyoscyamus, Powder, grs. ij to v.
Extract, gr. j.
Tincture, gtt. xx to f℥ss.

Ignatia, Extract, gr. $\frac{1}{8}$ to $\frac{1}{2}$
Tincture, gtt. x to xv.
Indigo, Powder, ℈j to ij.
Iodinium, gr. $\frac{1}{8}$ to j.
Tincture, gtt. x to xx.
Compound tincture, gtt. xv to xxx.
Lugol's Solution, gtt. v to x.
Iodoformum, gr. j to iij.
Ipecacuanha, Powder, as as Expectorant, gr. j to ij.
as an Emetic, grs. xv to xxx.
comp. grs. v to x.
Fluid Extract, ♏xv to xx.
Syrup, f℥j to ij.
Wine, f℥j to f℥j.

Jalapa, Powder, grs. x to xxx.
comp., ℥ss to j.
Extract, grs. v to x.
alkaline, grs. iij to ix.
Resin, grs. ij to v.
Soap, grs. x to xv.
Tincture, f℥j to ij.
Juglans Cinerea, Extract, grs. v to xxx.
Juniperus, Extract, ℥j to iij.
Infusion, f℥ij to iv.
Oil, gtt. iij to vj.

Kamala, ℥ss to ij.
Kino, Powder, grs. x to xx.
Tincture, f℥ss to ij.
Krameria, Powder, grs. xx to xxx.
Extract, grs. x to xx.
Infusion, f℥j to ij.
Krameria, Syrup, f℥ss.
Tincture, f℥j to ij.

Lactucarium, grs. iij.
Syrup, f℥ss to ij.
Lauro-Cerasus, Water, f℥ss to j.
Leptandra, Powder, grs. xx to xxx.
Liquidambar, Bark, Syrup, f℥ss to j.
Liriodendron, Powder, ℥ss to ij.
Infusion, f℥j to ij.
Tincture, f℥j to ij.
Lithium, Carbonate, grs. iij to vj.
Citrate, grs. v to x.
Lobelia, Powder, grs. v to x.
Tincture, f℥ss to j.
Vinegar, f℥ss to j.
Lupulina, grs. v to x.
Fluid Extract, ♏v to x.
Tincture, f℥j to ij.

Macis, grs. x to ℈j.
Tincture, gtt. xxx to xl.
Magnesia, ℥j.
Magnesium, Carbonate, ℈j to ℥j.
Citrate, Solution, f℥iv to xij.
Phosphate, grs. x to xx.
Sulphate, ℥j.
Sulphuret, Syrup, f℥ss.
Magnolia, Powder, ℥ss to j.
Manganesium, Carbonate, grs. x to ℈j.
Chloride, grs. iv to x.
Oxide, grs. ij to iv.
Sulphate, ℥ss to ij.
Manna, ℥ss to ij.
Mannite, ℥ij to ℥ij.
Marrubium, Extract, ℈j to ℥ss.
Matico, Infusion, f℥j.
Fluid extract, ♏x to xxx.
Tincture, gtt. xxx to f℥j.
Syrup, f℥j to ij.
Matricaria, Syrup, f℥ss to j.
Mentha Piperita, Oil, gtt. j to iij.
Essence, gtt. x to xx.
Water, f℥ss.
Mentha Viridis, Infusion, f℥j to ij.
Oil, gtt. ij.
Menyanthes, Powder, grs. xx to xxx.
Infusion, f℥j to ij.
Extract, grs. x to xv.
Mezereum, Decoction, f℥j to iv.
Monarda, Oil, gtt. j to ij.
Monesia, grs. ij to x.
Syrup, f℥ss.
Morphia, gr. $\frac{1}{8}$ to $\frac{1}{2}$.
Acetate, gr. $\frac{1}{8}$ to $\frac{1}{2}$.
Bimeconate, gr. $\frac{1}{4}$.

Morphia, Muriate, gr. $\frac{1}{8}$ to $\frac{1}{2}$.
Sulphate, gr. $\frac{1}{8}$ to $\frac{1}{2}$.
Moschus, grs. v to x.
Tincture, gtt. xxx to f℥j.
Mucuna, Electuary, ℥j to ij.
Myrrha, grs. x to xxx.
Tincture, f℥ss to j.

Narcotina, grs. ij.
Muriate, grs. ij to iv.
Nux vomica, Powder, grs. iij to v.
Extract, Alcoholic, gr. $\frac{1}{2}$ to ij.
Aqueous, gr. j to iij.
Tincture, gtt. v to xx.

Oleum Animale Empyreumatic., gtt. v. to x.
Cajuputi, gtt. ij to v.
Morrhuæ, f℥ss to ij.
Olivæ, f℥j.
Ricini, f℥ss to j.
Terebinthinæ, gtt. v to f℥j.
Tiglii, gtt. ss to ij.
Opium, gr. j.
Confection, grs. x.
Extract, gr. ss.
Vinegar, Black drop, gtt. vij to x.
Lancaster Black drop, gtt. vj to x.
Houlton's Black drop, gtt. xx.
Rousseau's Black drop, gtt. iv.
Porter's Black Drop, gtt. v to xx.
Tincture, gtt. xxv.
acetated, gtt. xx.
deodorized, gtt. xxv.
Smith's, gtt. iij to v.
Ammoniated, f℥ss to j.
Camphorated, f℥j to iij.
Swediaur's, gtt. v.
Wine, gtt. xx.
Opoponax, grs. x to xx.

Pancreatin, Solution, f℥ss to j.
Papaver, Extract, grs. ij to v.
Syrup, f℥ij to f℥j.
Pareira Brava, Powder, grs. xxx to ℥j.
Fluid Extract, f℥ss to j.
Infusion, f℥j to ij.
Decoction, f℥j to ij.
Extract, grs. x to xx.
Tincture, gtt. l to lx.
Paullinia, grs. x to xx.
Pepsinum, Saccharated, grs. v to xv.
Petroleum, ℥ss to j.
Petroselinum, Infusion, f℥ij to iv.
Phloridzinum, grs. v. to xv.
Phosphorus, gr. $\frac{1}{16}$.
Phosphorus, Oil, gtt. v to x.
Physostigma, Powder, gr. j to v.
Extract, gr. $\frac{1}{16}$ to $\frac{1}{2}$.
Phytolacca, Powder, grs. x to xxx.
Piper Nigrum, Confection, ℥j to ij.
Oleoresin, gtt. j to iij.
Piperina, grs. ij to x.
Piscidia Erythrina, Tincture, f℥j.
Pix liquida, ℥ss to j.
Platini Bichloridum, gr. $\frac{1}{8}$ to $\frac{1}{4}$.
Plumbum, Acetate, gr. j to iv.
Iodide, gr. $\frac{1}{2}$ to j.
Podophyllum, Powder, grs. x to xx.
Extract, grs. v to xv.
Resin, gr. $\frac{1}{4}$ to j.
Potassa, Solution, ♏x to xv.
Potassium, Acetate, ℥ss to ij.
Arsenite, solution, gtt. x.
Arseniate, gr. $\frac{1}{10}$.
Bi-carbonate, gr. xv to xxx.
Bisulphate, ℥j to ij.
Bitartrate, ℥j to iv.
Borate, gr. v to x.
Boro-tartrate, ℥ij to ℥ss.
Bromide, grs. v to xxx.
Carbonate, grs. v to xx.
Chlorate, grs. x to xx.
Chloride, ℈j to ij.
Citrate, ℈j to iij.
Solution, f℥ss.
Cyanide, gr. $\frac{1}{8}$ to $\frac{1}{4}$.
Iodide, grs. ij to xv.
Iodo-hydrargyrate, gr. $\frac{1}{12}$.
Nitrate, grs. v to x.
Silicate, grs. x to xv.
Sulphate, ℥iv to v.
Tartrate, ℥j to ℥j.
and Ammonium, Tartrate, ℥j.
and Sodium, Tartrate, ℥ss to j.
Prinos, Powder, grs. xxx to ℥j.
Decoction, f℥ij.
Prunus Virginiana, Powder, grs. xxx to ℥ij.
Fluid Extract, f℥j.
Infusion, f℥ij.
Syrup, f℥j to f℥j.

Quassia, Infusion, f℥j.
Extract, grs. ij to v.
Tincture, f℥j to ij.
Quercus, Powder, grs. xxx to ℥j.
Extract, grs. x to xx.
Decoction, f℥ij to iij.
Quinia, as a tonic, gr. j to ij.
as an anti-intermittent, grs. viij to xx.

Quinia, Amorphous, gr. j to iv.
Acetate, gr. j to ij.
Arsenite, gr. $\frac{1}{3}$.
Citrate, gr. j to ij.
Ferrocyanate, gr. j to ij.
Mercury and, Chloride, gr. $\frac{1}{2}$.
Kinate, gr. j to ij.
Lactate, gr. j to ij.
Muriate, gr. j to ij.
Sulphate, gr. j to ij.
Valerianate, gr. j to ij.

Rheum, Powder, grs. x to xxx.
Roasted, grs. v to x.
Infusion, f℥j to ij.
Extract, grs. x to xx.
Fluid, ♏x to xxx.
Syrup, f℥j to f℥ss.
Aromatic, f℥j to f℥ss.
Tincture, f℥j to f℥ss.
and Senna, f℥j to f℥ss.
Wine, f℥j to iv.
Rottlera, ℥ss to ij.
Rubia, Powder, ℥ss.
Decoction, f℥ij.
Rubus, Fluid extract, f℥ss to j.
Syrup, f℥ss to j.
Ruta, Powder, grs. x to xx.
Oil, gtt. ij to iij.

Sabadilla, Powder, grs. ij to v.
Extract, gr. $\frac{1}{6}$.
Sabbatia, Infusion, f℥ij to iv.
Sabina, Powder, grs. x to xv.
Oil, gtt. ij to v.
Fluid Extract, ♏v to xv.
Tincture, f℥ss to j.
Silicin, grs. iv to vj.
Salvia, Infusion, f℥ij to iv.
Sanguinaria, Powder, grs. x to xx.
Tincture, f℥ss to ij.
Santonica, Powder, grs. x to lx.
Oleoresin, grs. v to xv.
Santonin, gr. ss to v.
Sarsaparilla, Powder, ℥ss to j.
Decoction, f℥iv to vj.
Extract, grs. x to xx.
Fluid, f℥j.
Syrup, f℥ss to j.
Compound, f℥ss to j.
Sassafras, Infusion, f℥j to ij.
Oil, gtt. ij to v.
Scammonium, Powder, grs. v to x.
Confection, grs. xx to xxx.
Resin, grs. iij to viij.
Scilla, Powder, gr. j to ij.
Scilla, syrup, f℥j.
Compound, gtt. x to f℥j.
Tincture, gtt. xx to xl.
Extract, gr. ss to ij.
Vinegar, f℥ss to j.
Oxymel, f℥j to ij.
Scoparius, Infusion, f℥ij to iv.
Extract, ℈j to ℥j.
Senega, Powder, grs. x to xx.
Infusion, f℥j to ij.
Decoction, f℥ss.
Fluid extract, ♏x to xx.
Syrup, f℥j to ij.
Senna, Powder, ℥ss to ij.
Confection, ℥ij.
Infusion, f℥iv.
Syrup, f℥j to ij.
Extract, fluid, f℥ss.
Serpentaria, Powder, grs. x to xxx.
Fluid extract, ♏x to xxx.
Infusion, f℥j to ij.
Tincture, f℥j to ij.
Simaruba, Infusion, f℥ij.
Soda, solution, ♏x to xxx.
Sodium Chloride, grs. x to ℥ss.
Arseniate, gr. $\frac{1}{16}$ to $\frac{1}{8}$.
Bi-carbonate, grs. xv to xxx.
Borate, grs. xx to xxx.
Carbolate solution, grs. ij to v.
Carbonate, grs. x to xx.
Acetate, ℈j to ℥iv.
Hyposulphite, grs. x to ℥j.
Nitrate, gr. v to x.
Phosphate, ℥iv to ℥j.
Sulphate, ℥ss to j.
Tartrate, ℥ss to j.
and Potassium, Tartrate, ℥ij to ℥j.
Valerianate, grs. ij to v.
Spigelia, Powder, ℥j to ij.
Infusion, f℥iv to f℥j.
Comp. f℥j to ij.
Extract, Fluid, ℥j to ℥ss
Spiræa, Decoction, f℥j to ij.
Extract, grs. v to ℈j.
Spongia, Burnt, ℥j to ij.
Stannum, Powder, ℥ss.
Chloride, grs. ij.
Sulphuret, grs. x to xx.
Oxide, grs. v to vj.
Statice, grs. x to xxx.
Stillingia, as an alterative, grs. iij to v.
as an emetic, ℈j to jss.
Stramonium, Powder, grs. ij to iij.
(seeds), gr. j.
Extract (seeds), gr. $\frac{1}{4}$ to $\frac{1}{2}$.

Stramonium, extract (leaves), gr. j.
Tincture (seeds), gtt. xx to xxx.
Strychnia, gr. $\frac{1}{16}$ to $\frac{1}{10}$.
Acetate, solution, gtt. v.
Iodate, gr. $\frac{1}{8}$.
Styrax, grs. x to xx.
Succinum, Oil, gtt. v to xv.
Tincture, gtt. xl to lx.
Sulphur, Precipitated, ʒss to ij.
Electuary, ʒj to ij.
Sulphuris Carburetum, gtt. ij to iij.

Tabacum, Wine, ♏x to xx.
Tincture, ♏x to xx.
Tanacetum, Extract, grs. v to ℈j.
Oil, gtt. j to ij.
Taraxacum, Decoction, fʒj to iij.
Extract, ℈j to ʒj.
Fluid, fʒj.
Terebinthina, grs. ij to v.
Oil, gtt. v to fʒj.
Testa præparata, grs. x to xxx.
Tolutanum, grs. x to xxx.
Tincture, fʒj to ij.
Syrup, fʒj to fʒss.
Tormentilla, Powder, grs. xxx to ʒj.
Decoction, fʒj to ij.
Toxicodendron, Powder, gr. $\frac{1}{2}$ to ij.
Extract, gr. j.
Tussilago, Decoction, fʒij to iv.
Syrup, fʒj to fʒss.

Ulmus Campestris, Decoction, fʒij to iv.
Ulmus Fulva, Decoction, fʒiv to vj.
Uva Ursi, Powder, ℈j to ʒj.
Decoction, fʒj to ij.
Extract, grs. v to xxx.
Fluid extract, fʒss to j.

Valeriana, Powder, ʒss to j.
Electuary, ʒj to ij.
Infusion, fʒij.
Tincture, fʒj to iv.
Ammon. fʒj to ij.
Wine, fʒj to iv.
Oil, gtt. ij to v.
Extract, grs. ij to x.
Fluid, fʒss to j.
Vanilla, Powder, grs. v to x.
Tincture, gtt. xxx to xl.
Veratria, gr. $\frac{1}{12}$ to $\frac{1}{6}$.
Tincture, gtt. v to x.
Veratrum Album, Powder, gr. j to ij.
Wine, ♏x.
Tincture, ♏x.
Veratrum Viride, Powder, gr. j.
Tincture, fʒss to j.
Norwood's, gtt. viij.
Wine, fʒss to j.
Extract, gr. $\frac{1}{4}$ to $\frac{1}{2}$.
Viola Odorata, Syrup, fʒj to ij.

Wintera, Powder, ʒss to j.

Zinci Oxidum, grs. ij to x.
Chloridum, Solution, gtt. v.
Tincture, gtt. v.
Cyanidum, gr. $\frac{1}{12}$ to $\frac{1}{4}$.
Ferrocyanidum, gr. j.
Sulphas, gr. j to xxx.
Solution, fʒss.
Valerianas, gr. j to ij.
Zingiber, Powder, grs. x to ℈j.
Tincture, fʒj to ij.
Syrup, fʒss.
Oleoresin, gr. j to ij.

TABLE OF PHARMACEUTICAL NAMES

WHICH

DIFFER IN THE UNITED STATES, THE BRITISH, GERMAN, AND FRENCH PHARMACOPŒIAS.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Absinthium,	———	Herba absinthii,	Absinthe commune.
Acacia,	Acaciæ gummi,	Gumma Arabicum,	Gomme Arabique.
Acetum destillatum,	———	Acetum purum,	Vinaigre distillé.
Acidum aceticum,	Acidum aceticum,	Acidum aceticum dilutum,	Acide acétique.
Acidum arseniosum,	Acidum arseniosum,	Acidum arseniosum,	Acide arsénieux.
Acidum muriaticum,	Acidum hydrochloricum,	Acidum hydrochloricum et hydrochloricum crudum,	Acide chlorhydrique.
Acidum nitricum,	Acidum nitricum,	Acidum nitricum, nitricum crudum, et fumans,	Acide azotique.
Acidum nitro-muriaticum dilutum.	Acidum nitro-hydrochloricum dilutum,	———	———
Acidum sulphuricum aromaticum,	Acidum sulphuricum aromaticum,	Tinctura aromatica acida,	Elixir vitriolique.
Aconiti folia,	Aconiti folia,	Folia aconiti,	Feuilles d'aconit.
Aconiti radix,	Aconiti radix,	Tubera aconiti,	Racine d'aconit.
Adeps,	Adeps præparatus,	Adeps suillus,	Axonge.
Æther fortior,	Æther purus,	Æther,	Ether hydrique.
Alcohol,	Spiritus rectificatus,	Spiritus,	Alcool.
Alcohol dilutum,	Spiritus tenuior,	———	———
Aloe barbadensis,	Aloe barbadensis,	———	Aloès hépatique des Barbades.
Aloe capensis,	———	Aloe, vel aloe capensis vel lucida,	———
Aloe socotrina,	Aloe socotrina,	———	Aloès sucotrin.
Althæa,	———	Radix althææ.	Racine de guimauve.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Alumen,	Alumen,	———	———
Aluminii et potassii sulphas,	———	Alumen,	Alun.
Alumen exsiccatum,	Alumen exsiccatum,	Alumen ustum,	Alun calciné.
Ammonii benzoas,	Ammoniæ benzoas,	———	———
Ammonii carbonas,	Ammoniæ carbonas,	Ammonium carbonicum,	Carbonate d'ammonique.
Ammonii chloridum,	Ammonii chloridum,	Ammonium chloratum,	Chlorure d'ammonium.
———	Ammoniæ phosphas,	Ammonium phosphoricum,	———
Amygdala amara,	Amygdala amara,	Amygdalæ amaræ,	Amandes amères.
Amygdala dulcis,	Amygdala dulcis,	Amygdalæ dulces,	Amandes douces.
Angustura,	Cuspariæ cortex,	———	Angusture vraie.
Anthemis,	Anthemidis flores,	Flores chamomillæ romanæ,	Camomille romaine.
Antimonii et potassii tartras,	Antimonium tartaratum,	Tartarus stibiatus.	Tartre stibié.
Antimonii oxysulphuretum,	———	Stibium sulfuratum rubeum,	Sulfure d'antimoine hydraté.
Antimonii sulphuretum,	Antimonium nigrum,	Stibium sulfuratum lævigatum,	Sulfure d'antimoine.
Antimonium sulphuratum,	Antimonium sulphuratum,	Stibium sulfuratum auranticum,	———
Aqua ammoniæ,	Liquor ammoniæ,	Liquor ammonii caustici,	Ammoniaque liquide.
Aqua ammoniæ fortior,	Liquor ammoniæ fortior,	———	———
Aqua aurantii florum,	Aqua aurantii floris,	Aqua florum aurantii,	Eau destillée de fleurs d'oranger.
Aqua amygdalæ amaræ,	———	Aqua amygdalarum amararum dilutum,	Eau déstillée d'amandes amères.
Aqua chlorinii,	Liquor chlori,	Aqua chlorata,	Eau chlorée.
Argenti nitras,	Argenti nitras,	Argentum nitricum crystallisatum,	Azotate d'argent crystallisé.
Argenti nitras fusa,	———	Argentum nitricum fusum,	Azotate d'argent fondu.
Atropiæ sulphas,	Atropiæ sulphas,	Atropinum sulfuricum,	Sulfate d'atropine.
Aurantii amari cortex,	Aurantii cortex,	Cortex fructus aurantii,	———
Barii chloridum,	———	Baryum chloratum,	Chlorure de baryum.
Benzoinum,	Benzoinum,	Benzoe,	Benjoin.
Bismuthi subnitras,	Bismuthi subnitras,	Bismuthum subnitricum,	Sous-azotate de bismuth.
Brayera,	Cusso,	Flores kosso,	Cousso.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Brominium,	Bromum,	Bromum,	Brome.
Buchu,	Buchu folia,	———	Bucco.
Cadmii sulphas,	———	Cadmium sulfuricum,	Sulfate de cadmium.
Calamus,	———	Rhizoma calami,	Acore vrai.
Calcii carbonas præcipitata,	Calcis carbonas præcipitata,	Calcaria carbonica præcipitata,	Carbonate de chaux.
Calcii phosphas præcipitata,	Calcis phosphas,	Calcaria phosphorica,	Phosphate de chaux.
Calx,	Calx,	Calcaria usta,	Chaux vive.
Calx chlorinata,	Calx chlorata,	Calcaria chlorata,	Chlorure de chaux.
Calumba,	Calumbæ radix,	Radix colombo,	Colombo.
Carbo ligni,	Carbo ligni,	Carbo pulveratus,	Charbon végétal.
Carum,	Carui fructus,	Fructus carvi,	Carvi.
Caryophyllus,	Caryophyllum,	Caryophylli,	Girofle.
Catechu,	Catechu pallidum,	Catechu,	Cachou.
Ceratum cantharidis,	Emplastrum cantharidis,	Emplastrum cantharidum ordinarium,	Emplâtre vésicatoire.
Ceratum plumbi subacetatis,	Unguentum plumbi subacetatis compositum,	Unguentum plumbi,	Cérat de saturne.
Ceratum resinæ,	Unguentum resinæ,	Unguentum basilicum,	Onguent basilicum.
Ceratum sabinæ,	Unguentum sabinæ,	Unguentum sabinæ,	———
Cetraria,	Cetraria,	Lichen islandicus,	Lichen d'Islande.
Charta cantharides,	Charta epispastica,	———	———
Chiretta,	Chirata,	———	———
Chloral,	———	Chloralum hydratum crystallisatum,	Hydrate de chloral.
Chloroformum purificatum,	Chloroformum,	Chloroformium,	Chloroforme.
Cinchona flava,	Cinchonæ flavæ cortex,	Cortex chinæ calisayæ,	Quinquina jaune.
Cinchona pallida,	Cinchonæ pallidæ cortex,	Cortex chinæ fuscus,	Quinquina gris.
Cinchona rubra,	Cinchonæ rubræ cortex,	Cortex chinæ ruber,	Quinquina rouge.
Cinchoniæ sulphas,	———	Cinchonium sulfuricum,	Sulfate de cinchonine.
Cinnamomum,	Cinnamomi cortex,	Cortex cinnamomi cassiæ et zeylanici,	Canelle de Chine et de Ceylon.
Coccus,	Coccus,	Coccionella,	Cochenille du nopal.
Colchici radix,	Colchici cormus,	———	Bulbe de colchique.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Colchici semen,	Colchici semina,	Semen colchici,	Semences de colchique.
Colocynthis,	Colocynthidis pulpa,	Fructus colocynthidis,	Coloquinte.
Confectio opii,	Confectio opii,	Electuarium theriaca,	Electuaire thériaque.
Confectio rosæ,	Confectio rosæ gallicæ,	———	Conserve de rose rouge.
Confectio sennæ,	Confectio sennæ,	Electuarium e senna,	Electuaire de séné composé.
Copaiba,	Copaiba,	Balsamum copaivæ,	Copahu.
Coriandrum,	Coriandri fructûs,	Fructûs coriandri,	Coriandre.
Cuprum ammoniatum,	———	Cuprum sulphuricum ammoniatum,	———
Cupri subacetas,	———	Aerugo,	Acétate basique de cuivre.
Decoctum sarsaparillæ compositum,	Decoctum sarsæ compositum,	Decoctum sarsaparillæ fortius et mitius,	Tisane de salsepareille.
Digitalis,	Digitalis folia,	Folia digitalis,	Digitale pourprée.
Dulcamara,	Dulcamara,	Stipites dulcamara,	Douce-amère.
Emplastrum galbani compositum,	Emplastrum galbani,	Emplastrum lithargyri compositum,	Emplâtre diachylon gommé.
Emplastrum picis burgundicæ,	Emplastrum picis,	Emplastrum picis irritans,	Emplâtre de poix de Bourgogne.
Emplastrum picis cum cantharide,	Emplastrum calefaciens,	Emplastrum cantharidum perpetuum,	———
Emplastrum plumbi,	Emplastrum plumbi,	Emplastrum lithargyri simplex,	Emplâtre simple.
Emplastrum saponis,	Emplastrum saponis,	Emplastrum saponatum,	Emplâtre de savon.
Ergota,	Ergota,	Secale cornutum,	Seigle ergoté.
Extractum cinchonæ,	———	Extractum Chinæ fuscæ,	Extrait de quinquina.
Extractum glycyrrhizæ,	Extractum glycyrrhizæ,	Succus liquiritiæ crudus et depuratus,	Extrait de réglisse.
Extractum hæmatoxyli,	Extractum hæmatoxyli,	Extractum ligni campechiani,	———
Extractum krameriæ,	Extractum krameriæ,	Extractum ratanhæ,	Extrait de ratanhia.
Extractum nucis vomicæ,	Extractum nucis vomicæ,	Extractum strychni spirituosum,	Extrait de noix vomique.
Extractum physostigmatis,	Extractum physostigmatis,	Extractum fabæ calabaricæ,	Extrait de fèves de calabar.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Extractum stramonii foliorum,	———	Extractum stramonii,	Extrait de stramoine.
Extractum stramonii seminis,	Extractum stramonii,	———	Extrait de semences de stramoine.
Extractum cinchonæ fluidum,	Extractum cinchonæ liquidum,	———	———
Extractum ergotæ fluidum,	Extractum ergotæ liquidum,	———	———
Extractum pareiræ fluidum,	Extractum pareiræ liquidum,	———	———
Extractum sarsaparillæ fluidum,	Extractum sarsæ liquidum,	———	———
———	Fel bovinum purificatum,	Fel tauri depuratum siccum,	Fiel de bœuf.
———	Ferri carbonas saccharata,	Ferrum carbonicum saccharatum,	———
Ferri chloridum,	———	Ferrum sesquichloratum,	Perchlorure de fer.
Ferri citras,	———	Ferrum citricum oxydatum,	———
Ferri et ammonii citras,	Ferri et ammoniæ citras,	Ferrum citricum ammoniatum,	Citrate de fer et d'ammoniaque.
Ferri et ammonii sulphas,	———	Ferrum sulphuricum oxydatum ammoniatum,	———
Ferri et potassii tartras,	Ferrum tartaratum,	———	Tartrate de fer et de potasse.
Ferri lactas,	———	Ferrum lacticum,	Lactate de fer.
Ferri oxidum hydratum,	Ferri peroxidum humidum,	Antidotum arsenici,	Sesquioxide de fer humide.
Ferri subcarbonas,	Ferri peroxidum hydratum,	Ferrum oxydatum fuscum,	Sesquioxide de fer hydraté.
Ferri phosphas,	Ferri phosphas,	Ferrum phosphoricum,	Phosphate de fer.
Ferri pyrophosphas,	———	Ferrum pyrophosphoricum cum ammonio citrico,	Pyrophosphate de fer citro-ammoniacal.
Ferri sulphas,	Ferri sulphas et granulata,	Ferrum sulphuricum purum,	Sulphate de fer.
Ferri sulphas exsiccata,	Ferri sulphas exsiccata,	Ferrum sulphuricum siccum,	Sulphate de fer desséché.
Ficus,	Ficus,	Caricæ,	Figue.
Filix mas,	Filix mas,	Rhizoma filicis,	Fougère mâle.
Fœniculum,	Fœniculi fructus,	Fructus fœniculi,	Fenouil.
Gambogia,	Cambogia,	Gutti,	Gutte.
Gentiana,	Gentianæ radix,	Radix gentianæ,	Gentiane.
Glycerina,	Glycerinum,	Glycerinum,	Glycérine.
Glyceritum acidi carbolici,	Glycerinum acidi carbolici,	———	———

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Glyceritum acidi gallici,	Glycerinum acidi gallici,	———	———
Glyceritum acidi tannici,	Glycerinum acidi tannici,	———	Glycéré de tannin.
———	Glycerinum amyli,	Unguentum glycerini,	Glycéré d'amidon.
Glyceritum sodii boratis,	Glycerinum boracis,	———	———
Glycyrrhiza,	Glycyrrhizæ radix,	Radix liquiritiæ glabræ et mundata,	Réglisse.
Hæmatoxylon,	Hæmatoxyli lignum,	Lignum Campechianum,	Bois de Campêche.
Hordeum,	Hordeum decorticatum,	———	Orge perlé.
Humulus,	Lupulus,	———	Houblon.
Hydrargyri chloridum corrosivum,	Hydrargyri perchloridum,	Hydrargyrum bichloratum corrosivum,	Deutochlorure de mercure.
Hydrargyri chloridum mite,	Hydrargyri subchloridum,	Hydrargyrum chloratum mite, et vapore paratum,	Protochlorure de mercure.
Hydrargyri iodidum rubrum,	Hydrargyri iodidum rubrum,	Hydrargyrum biiodatum rubrum,	Bi-iodure de mercure.
Hydrargyri iodidum viride,	Hydrargyri iodidum viride,	Hydrargyrum iodatum flavum,	Protoiodure de mercure.
Hydrargyri oxidum flavum,	———	Hydrargyrum oxydatum via humida paratum,	———
Hydrargyri oxidum rubrum,	Hydrargyri oxidum rubrum,	Hydrargyrum oxydatum rubrum,	Peroxyde de mercure.
Hydrargyri sulphuretum rubrum,	———	Hydrargyrum sulfuratum rubrum,	Sulfure rouge de mercure.
Hydrargyrum ammoniatum,	Hydrargyrum ammoniatum,	Hydrargyrum præcipitatum album,	———
Infusum angusturæ,	Infusum angusturæ,	———	———
Infusum humuli,	Infusum lupuli,	———	Tisane de houblon.
Infusum lini compositum,	Infusum lini,	———	———
Infusum rosæ compositum,	Infusum rosæ acidum,	———	———
Infusum tabaci,	Enema tabaci,	———	———
Inula,	———	Radix helenii,	Aunée.
Iodinium,	Iodum,	Iodum,	Iode.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Iodoformum,	———	Iodoformium,	Iodoforme.
Iris florentina,	———	Rhizoma iridis,	Iris de Florence.
Jalapa,	Jalapa,	Tubera jalapæ,	Jalap.
Juniperus,	———	Fructus juniperi,	Genièvre.
Krameria,	Krameriæ radix,	Radix ratanhæ,	Ratanhia.
Lappa,	———	Radix bardanæ,	Bardane.
Limonis cortex,	Limonis cortex,	Cortex fructus citri,	Zeste de citron.
Linum,	Lini semina,	Semen lini,	Semences de lin.
Linimentum ammoniæ,	Linimentum ammoniæ,	Linimentum ammoniatum,	Liniment ammoniacal.
Linimentum camphoræ,	Linimentum camphoræ,	Oleum camphoratum,	Huile camphrée.
———	Linimentum camphoræ compositum,	Linimentum ammoniato-camphoratum,	———
Linimentum saponis,	Linimentum saponis,	Linimentum saponato-camphoratum liquidum,	Liniment savonneux camphrée.
Liquor ammonii acetatis,	Liquor ammoniæ acetatis,	Liquor ammonii acetici,	Acétate d'ammoniaque liquide.
———	Liquor antimonii chloridi,	Liquor stibii chlorati,	———
Liquor arsenici chloridi,	Liquor arsenici hydrochloricus,	———	———
Liquor calcis,	Liquor calcis,	Aqua calcariæ,	Eau de chaux.
Liquor ferri chloridi,	Liquor ferri perchloridi, et fortior,	Liquor ferri sesquichlorati,	Solution de perchlorure de fer.
Liquor ferri nitratis,	Liquor ferri pernitratis,	———	———
Liquor ferri tersulphatis,	Liquor ferri persulphatis,	Liquor ferri sulfurici oxydati,	———
Liquor hydrargyri nitratis,	Liquor hydrargyri nitratis acidus,	———	Nitrate de mercure liquide.
Liquor iodinii compositus,	Liquor iodi,	———	———
Liquor plumbi subacetatis,	Liquor plumbi subacetatis,	Liquor plumbi subacetici,	Acétate de plomb liquide.
Liquor plumbi subacetatis dilutus,	Liquor plumbi dilutus,	Aqua plumbi, et Aqua plumbi Goulardi,	Eau de Goulard.
Liquor potassæ,	Liquor potassæ,	Liquor kali caustici,	Potasse caustique liquide.
Liquor potassii arsenitis,	Liquor arsenicalis,	Liquor kali arsenicosi,	Liqueur arsénicale (Fowler).
Liquor sodæ,	Liquor sodæ,	Liquor natri caustici,	Soude caustique liquide.
Liquor sodæ chlorinatæ,	Liquor sodæ chloratæ,	Liquor natri chlorati,	Liqueur de Labarraque.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Liquor sodii arseniatis,	Liquor sodæ arseniatis,	———	Liqueur arsénicale (Pearson).
Lithii carbonas,	Lithiæ carbonas,	Lithium carbonicum,	Carbonate de lithine.
———	Lotio hydrargyri flava,	Aqua phagedænica,	———
———	Lotio hydrargyri nigra,	Aqua phagedænica nigra,	———
Magnesia,	Magnesia, et magnesia levis,	Magnesia usta,	Magnésie.
Magnesii carbonas,	Magnesiæ carbonas et carbonas levis,	Magnesia carbonica,	Carbonate de magnésie.
Magnesii sulphas,	Magnesiæ sulphas,	Magnesia sulfurica,	Sulfate de magnésie.
Manganesii oxidum nigrum,	Manganesii oxidum nigrum,	Manganum hyperoxydatum,	Oxyde de manganése.
Maranta,	———	Amylum marantæ,	———
Mastiche,	Mastiche,	Mastix,	Mastic.
Matico,	Maticæ folia,	———	———
Matricaria,	———	Flores chamomillæ vulgaris,	Camomille commune.
Mel despumatum,	Mel depuratum,	Mel depuratum,	Mellite simple.
Mel rosæ,	———	Mel rosatum,	Mellite de roses rouges.
Mel sodii boratis,	Mel boracis,	———	———
Mezereum,	Mezerei cortex,	Cortex mezerei,	Mézéréon.
Mistura assafœtida,	Enema assafœtidæ,	———	———
Morphia,	———	Morphinum,	Morphine.
Morphiæ acetas,	Morphiæ acetas,	Morphinum aceticum,	Acétate de morphine.
Morphiæ murias,	Morphiæ hydrochloras,	Morphinum hydrochloricum,	Chlorhydrate de morphine.
Morphiæ sulphas,	———	Morphinum sulfuricum,	Sulfate de morphine.
Mucilago acaciæ,	Mucilago acaciæ,	Mucilago gummi arabici,	———
Myristica,	Myristica,	Semen myristicæ,	———
Nux vomica,	Nux vomica,	Semen strychni,	Noix vomique.
Oleoresina cubebæ,	———	Extractum cubebarum,	———
Oleoresina filicis,	Extractum filicis liquidum,	Extractum filicis,	Huile de fougère mâle.
Oleum amygdalæ expressum,	Oleum amygdalæ,	Oleum amygdalarum,	Huile d'amandes douces.
Oleum bergamii,	———	Oleum bergamottæ,	Huile volatile de bergamote.
Oleum cajuputi,	Oleum cajuputi,	Oleum cajeputi,	Huile volatile de cajeput.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Oleum cari,	Oleum carui,	Oleum carvi,	Huile volatile de carvi.
Oleum cinnamomi,	Oleum cinnamomi,	Oleum cinnamomi cassiæ et zeylanici.	Huile volatile de canelle.
Oleum limonis,	Oleum limonis,	Oleum citri,	Huile volatile de citron.
Oleum menthæ viridis,	Oleum menthæ viridis,	Oleum menthæ crispæ,	Huile volatile de menthe crépue.
Oleum morrhuæ,	Oleum morrhuæ,	Oleum jecoris aselli,	Huile de foie de morue.
———	Oleum myristicæ expressum,	Oleum myristicæ,	———
Oleum olivæ,	Oleum olivæ,	Oleum olivarum,	Huile d'olive.
Oleum theobromæ,	Oleum theobromæ,	Oleum cacao,	Beurre de cacao.
Oleum tiglii,	Oleum crotonis,	Oleum crotonis,	Huile de croton.
Ovum,	Ovi vitellus,	———	———
Physostigma,	Physostigmatis faba,	Faba calabarica,	Féve de calabar.
Pilulæ aloës,	Pilula aloes barbadensis et socotrina,	———	Pilules d'aloès.
———	Pilula aloes et ferri,	Pilulæ aloeticæ ferratæ,	———
Pilulæ antimonii compositæ,	Pilula hydrargyri subchloridi composita,	———	———
Pilulæ galbani compositæ,	Pilula assafœtida composita,	———	———
Pilula ferri carbonatis,	Pilula ferri carbonatis,	Pilulæ ferri carbonici,	Pilules de carbonate ferreux.
Piper,	Piper nigrum,	———	Poivre noir.
Plumbi acetas,	Plumbi acetas,	Plumbum aceticum,	Acétate de plomb crystallisé.
Plumbi carbonas,	Plumbi carbonas,	Cerussa,	Carbonate de plomb.—Céruse.
Plumbi iodidum,	Plumbi iodidum,	Plumbum iodatum,	Iodure de plomb.
Plumbi oxidum,	Plumbi oxidum,	Lithargyrum,	Litharge.
Potassa,	Potassa caustica,	Kali causticum fusum,	Potasse caustique.
Potassii acetas,	Potassæ acetas,	Kali aceticum,	Acétate de potasse.
Potassii bicarbonas,	Potassæ bicarbonas,	Kali bicarbonicum,	Bicarbonate de potasse.
Potassii bitartras,	Potassæ tartras acida,	Tartarus depuratus,	Bitartrate de potasse.
Potassii bromidum,	Potassii bromidum,	Kalium bromatum,	Bromure de potassium.
Potassii carbonas impurus,	———	Kali carbonicum crudum,	Potasse impure.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Potassii carbonas,	Potassæ carbonas,	Kali carbonicum depuratum,	Carbonate de potasse.
Potassii carbonas pura,	———	Kali carbonicum purum,	———
Potassii chloras,	Potassæ chloras,	Kali chloricum,	Chlorate de potasse.
Potassii ferrocyanidum,	Potassæ prussias flava,	Kalium ferrocyanatum,	Cyanure de fer et de potassium.
Potassii iodidum,	Potassii iodidum,	Kalium iodatum,	Iodure de potassium.
Potassii nitras,	Potassæ nitras,	Kali nitricum,	Azotate de potasse.
Potassii permanganas,	Potassæ permanganas,	Kali hypermanganicum crystallisatum,	Pamanganate de potasse.
Potassii sulphas,	Potassæ sulphas,	Kali sulfuricum,	Sulfate de potasse.
Potassii sulphuretum,	Potassa sulphurata,	Kalium sulfuratum, / Kalium sulfuratum ad balneum.	Sulfure de potasse.
Potassii tartras,	Potassæ tartras,	Kali tartaricum,	Tartrate de potasse.
Potassii et sodii tartras,	Soda tartarata,	Tartarus natronatus,	Sel de seigrette.
Pulvis aromaticus,	Pulvis cinnamomi compositus,	Pulvis aromaticus,	———
Pulvis ipecacuanhæ compositus,	Pulvis ipecacuanhæ compositus,	Pulvis ipecacuanhæ opiatus,	Poudre de Dower.
Pulvis rhei compositus,	Pulvis rhei compositus,	Pulvis magnesiæ cum rheo,	———
Pulveres effervescentes,	———	Pulvis aërophorus anglicus,	Poudre gazeuse simple.
Pulveres effervescentes aperientes,	———	Pulvis aërophorus laxans,	Poudre gazifère purgative.
Quercus alba et Q. tinctoria,	Quercus cortex,	Cortex quercus,	Écorce de chêne.
Quiniæ sulphas,	Quiniæ sulphas,	Chininum sulfuricum,	Sulfate de quinine.
Resina,	Resina,	Colophonium,	Colophane.
Rheum,	Rhei radix,	Radix rhei,	Rhubarbe.
Rottlera,	Kamala,	Kamala,	Kamala.
Rosa centifolia,	Rosæ centifoliæ petala,	Flores rosæ,	Rose à cent feuilles.
Rosa gallica,	Rosæ gallicæ petala,	———	Rose rouge.
Saccharum,	Saccharum purificatum,	Saccharum,	Sucre.
Sambucus,	Sambuci flores,	Flores sambuci,	Fleurs de sureau.
Santonica,	Santonica,	Flores cinæ,	Semen contra.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Sapo,	Sapo durus,	Sapo medicatus, Sapo oleaceus,	Savon amygdalin. Savon blanc.
———	Sapo mollis,	Sapo viridis,	Savon vert.
Sarsaparilla,	Sarsæ radix,	Radix sarsaparillæ,	Salsepareille.
Sassafras	Sassafras radix,	Lignum sassafras,	Bois de sassafras.
Scilla,	Scilla,	Bulbus scillæ,	Scille.
Senegæ,	Senegæ radix,	Radix senegæ,	Polygale de Virginie.
Senna,	Senna Alexandrina et Indica,	Folia sennæ,	Sené.
Serpentaria,	Serpentariæ radix,	Radix serpentariæ,	Serpentaire.
Sinapis alba, Sinapis nigra,	Sinapis,	Semen sinapis,	Moutarde blanche et noire.
Soda,	Soda caustica,	———	———
Sodii acetas,	Sodæ acetas,	Natrum aceticum,	Acétate de soude.
Sodii arsenias,	Sodæ arsenias,	———	Arséniate de soude.
Sodii bicarbonas venalis, Sodii bicarbonas,	Sodæ bicarbonas,	Natrum bicarbonicum,	Bicarbonate de soude.
Sodii boras,	Borax,	Borax,	Borate de soude.
Sodii carbonas,	Sodæ carbonas,	Natrum carbonicum crudum et purum,	Carbonate de soude.
Sodii carbonas exsiccata,	Sodæ carbonas exsiccata,	Natrum carbonicum siccum,	———
Sodii nitras,	Sodæ nitras,	Natrum nitricum,	Azotate de soude.
Sodii phosphas,	Sodæ phosphas,	Natrum phosphoricum,	Phosphate de soude.
Sodii sulphas,	Sodæ sulphas,	Natrum sulfuricum,	Sulfate de soude.
Spiritus ætheris compositus,	Spiritus ætheris,	Spiritus æthereus,	Ether hydrique alcoolisé.
Spiritus camphoræ,	Spiritus camphoræ,	Spiritus camphoratus,	Alcoolé de camphre concentré, et faible.
Spiritus lavandulæ compositus,	Tinctura lavandulæ composita,	———	———
Strychnia,	Strychnia,	Strychninum,	Strychnine.
Styrax,	Styrax præparatus,	Styrax liquidus,	Styrax liquide.
Sulphur lotum,	———	Sulfur depuratum,	Soufre lavé.
Sulphuris iodidum,	Sulphuris iodidum,	Sulfur iodatum,	Iodure de soufre.
Suppositoria plumbi et opii,	Suppositoria plumbi composita,	———	———
Syrupus,	Syrupus,	Syrupus simplex,	Sirop de sucre.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Syrupus acaciæ,	———	Syrupus gummosus.	Sirop de gomme.
Syrupus fuscus,	Theriaca,	———	Mélasse.
Tamarindus,	Tamarindus,	Pulpa tamarindorum cruda et depurata,	———
Taraxacum,	Taraxaci radix,	Radix taraxaci, / Radix taraxaci cum herba,	Pissenlit.
Tinctura aconiti radicis,	Tinctura aconiti,	Tinctura aconiti,	Teinture d'aconit.
Tinctura aloës et myrrhæ,	———	Elixir proprietatis Paracelsi,	———
Tinctura benzoini,	———	Tinctura benzoes,	Teinture de benjoin.
Tinctura cannabis,	Tinctura cannabis indicæ,	Tinctura cannabis indicæ,	Teinture de chanvre indien.
Tinctura cantharidis,	Tinctura cantharidis,	Tinctura cantharidum,	Teinture de cantharides.
Tinctura castorei,	Tinctura castorei,	Tinctura castorei canadensis, / Tinctura castorei sibirici,	Teinture de castoréum.
Tinctura cinchonæ,	Tinctura cinchonæ flavæ,	Tinctura Chinæ,	Teinture de quinquina.
Tinctura cinchonæ composita,	Tinctura cinchonæ composita,	Tinctura Chinæ composita,	———
Tinctura colchici,	Tinctura colchici seminum,	Tinctura colchici,	Teinture de semences de colchique.
Tinctura ferri chloridi,	Tincturi ferri perchloridi,	Tinctura ferri chlorati,	———
Tinctura gallæ,	Tinctura gallæ,	Tinctura gallarum,	Teinture de noix de galle.
Tinctura humuli,	Tinctura lupuli,	———	Teinture de houblon.
Tinctura iodinii,	Tinctura iodi,	Tinctura iodi,	Teinture d'iode.
Tinctura krameriæ,	Tinctura krameriæ,	Tinctura ratanhæ,	Teinture de ratanhia.
Tinctura nucis vomicæ,	Tinctura nucis vomicæ,	Tinctura strychni,	Teinture de noix vomique.
Tinctura opii,	Tinctura opii,	Tinctura opii simplex,	Teinture d'opium.
Tinctura opii camphorata,	Tinctura camphoræ composita,	Tinctura opii benzoica.	Teinture d'opium camphrée.
Trochisci glycyrrhizæ et opii,	Trochisci opii,	———	———
Trochisci sodii bicarbonatis,	Trochisci sodæ bicarbonatis,	Trochisci natri bicarbonici,	Pastilles de bicarbonate de soude.
Unguentum,	Unguentum simplex,	Unguentum cereum,	Cérat simple, / Cérat jaune.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Unguentum antimonii,	Unguentum antimonii tartarati,	Unguentum tartari stibiati,	Pommade stibiée.
Unguentum aquæ rosæ,	———	Unguentum leniens,	Cérat cosmétique.
Unguentum benzoini,	Adeps benzoatus,	———	———
Unguentum cantharidis,	Unguentum cantharidis,	Unguentum cantharidum,	———
Unguentum hydrargyri,	Unguentum hydrargyri,	Unguentum hydrargyri cinereum,	Pommade mercurielle.
Unguentum hydrargyri ammoniati,	Unguentum hydrargyri ammoniati,	Unguentum hydrargyri præcipitati albi,	———
Unguentum hydrargyri oxidi rubri et flavi,	Unguentum hydrargyri oxidi rubri,	Unguentum hydrargyri rubrum, Unguentum ophthalmicum,	Pommade de précipité rouge.
Unguentum iodinii compositum,	Unguentum iodi,	———	———
Unguentum plumbi carbonatis,	Unguentum plumbi carbonatis,	Unguentum cerussæ,	Pommade de carbonate de plomb.
Unguentum potassii iodidi,	Unguentum potassii iodidi,	Unguentum kalii iodati,	Pommade iodurée.
Unguentum sulphuris,	Unguentum sulphuris,	Unguentum sulfuratum simplex,	Pommade soufrée.
Unguentum zinci oxidi,	Unguentum zinci,	Unguentum zinci,	Pommade d'oxyde de zinc.
Uva passa,	Uvæ,	———	———
Uva ursi,	Uvæ ursi folio,	Folia uvæ ursi,	Busserole.
Veratrum album,	———	Rhizoma veratri,	Ellébore blanc.
Veratrum viride,	Veratri viridis radix,	———	———
Vinum antimonii,	Vinum antimoniale,	Vinum stibiatum,	Vin antimonié.
Vinum colchici radicis,	Vinum colchici,	———	———
Vinum colchici seminis,	———	Vinum colchici,	———
Vinum opii,	Vinum opii,	Tinctura opii crocata,	Vin d'opium composé.
Vinum rhei,	Vinum rhei.	Tinctura rhei vinosa,	Vin de rhubarbe.
Vinum xericum,	Vinum xericum,	Vinum xerense,	———
Zinci acetas,	Zinci acetas,	Zincum aceticum,	Acétate de zinc.
Zinci carbonas præcipitata,	Zinci carbonas,	———	Carbonate de zinc.
Zinci chloridum,	Zinci chloridum,	Zincum chloratum,	Chlorure de zinc.

U. S. Ph.	Brit. Ph.	Ph. Germ.	Paris Codex.
Zinci oxidum,	Zinci oxidum,	Zincum oxydatum purum,	Oxyde de zinc.
Zinci oxidum venale,	———	Zincum oxydatum venale,	———
Zinci sulphas,	Zinci sulphas,	Zincum sulfuricum,	Sulfate de zinc.
Zinci valerianas,	Zinci valerianas,	Zincum valerianicum,	Valérianate de zinc.
Zingiber,	Zingiber,	Rhizoma zingiberis,	Gingembre.

Note.—All the names in the Paris Codex are given in the French, in the other pharmacopœias in the Latin language.

OFFICINAL PREPARATIONS AND DIRECTIONS.

INTERNAL REMEDIES.

Powders.—These are of two kinds: *simple* and *compound.* The first are prepared by pulverization; and the second by the mixture of two or more simple powders, except where one of the ingredients is employed to facilitate the more minute division of the others, as in the case of the powder of ipecacuanha and opium. Many of the most important articles used in this form are powdered by grinding and stamping, by persons who make it a special business. When this operation is performed by the apothecary or medical practitioner, it is most frequently accomplished by means of the pestle and mortar and the sieve: but in some cases, a stone slab and muller are required; whilst in others, the article is merely rubbed through a sieve. Whenever a substance cannot be dried completely without an alteration of its properties, recourse must be had to an intermedium, by which the moisture may be absorbed, or its state of aggregation modified. Thus, sugar is the best intermedium in pulverizing vanilla or nutmeg. When camphor is to be pulverized, the addition of a small quantity of alcohol will much facilitate the operation. In other cases, the intermedium should be of so hard a consistence as to assist in breaking down the substance to be pulverized; thus, gold-leaf is best reduced to powder by rubbing it with sulphate of potassium, and afterwards removing this latter by means of water.

The rules to be observed in the preparation of powders are:—

1. Operate, if possible, on perfectly dry articles, and in dry weather.

2. Adapt the nature of the mortar, and the mode of operating, to the nature of the substance: thus, woods and barks should be pulverized in an iron mortar; sugar, alum, and nitre, in one of marble; corrosive sublimate in one of glass.

3. The mortar should be provided with a cover to prevent particles from being forced out by the action of the pestle, and also to arrest the escape of the finer particles, which would otherwise be diffused through the atmosphere, causing a loss of the product, and an annoyance to the operator.

4. Separate, from time to time, by aid of a sieve, the pulverized portions, returning the coarser particles to the mortar; and repeat this alternate pulverization and sifting until the process is completed.

Compound Powders.—1. Each substance is to be pulverized separately, and the quantity ordered in the prescription then weighed off; otherwise, the due proportions will not be maintained.

2. Pulverize soft substances with those which are the reverse, which will thus serve as an intermedium.

3. Pass all the substances through the same sieve, as this will render them more homogeneous, and will also prevent unnecessary loss.

Some substances, however well dried, are reduced to powder with great difficulty by the usual modes of pulverization; as, for instance, nux vomica and jalap, which require to be exposed to the steam of boiling water for some time, and then rapidly dried.

Few articles, except those containing volatile constituents, are deteriorated in their properties by being pulverized. Some, on the contrary, become more active by this process, from their less active portions being separated; for instance, the powder of ipecacuanha, if properly prepared, and the ligneous part rejected, is far stronger than the root—all the efficient properties existing in the cortical portion.

Some other processes are employed to obtain certain powders: viz. Precipitation, elutriation, and granulation.

Precipitation.—Tartar emetic is obtained in a perfectly fine powder, by precipitation from a concentrated aqueous solution by means of alcohol; so, also, the precipitated carbonate of calcium is prepared by the action of a solution of carbonate of sodium on the solution of chloride of calcium.

Elutriation.—This is a method by which the finer particles of a powder are separated from the coarser. It is performed by diffusing the powder through water, permitting the heavier portions to subside, then withdrawing the fluid, holding the finer particles in suspension, into another vessel, and allowing them to subside. This process is employed in making prepared chalk, etc.

Granulation.—This is used to obtain certain metals in a finely divided state; as zinc, tin, iron, etc.

Zinc is granulated either coarsely or finely; the first form is procured by melting the metal in an iron ladle, and pouring it slowly, in a fine stream, into cold water; the fine powder is obtained by rubbing the melted metal in an iron mortar. This metal loses its ductile properties at about 400°, and becomes so brittle as to be pulverized without difficulty. It does not melt, except at a temperature of 773°, so that the melting is many degrees above its brittle point; hence, by beginning the trituration at the melting point, it gradually reaches that at which it is most readily pulverized. The mortar should be thick and well heated before the fluid metal is poured into it. After being granulated, it should be properly sifted.

The granulation of tin may be effected in the same manner; but a more common mode is to pour the melted metal into a strong wooden box, provided with a closely-fitting lid, and agitating till the tin is cold; by this means, it is rapidly converted into powder and small grains, which can be separated from each other by elutriation or sifting.

Iron is granulated by filing, or by means of a pestle and mortar (see page 278); but the best means to procure metallic iron in a finely-divided state is by reducing it from the state of the carbonate by means of hydrogen gas (see page 278).

Salts are likewise often granulated, either because, like sal ammoniac, they are very difficult to powder in the condition in which they are usually found in commerce, or, like nitrate of potassium and sulphate of iron, they are apt to retain much of the mother-liquor if crystallized, or the weighing of small quantities is facilitated, as in the case of nitrate of silver, or else they crystallize with difficulty, and are then very deliquescent, like acetate and citrate of potassium. The granulation is effected by making a hot saturated solution of the salt, filtering, if necessary, while hot, and stirring the filtered liquid frequently until quite cool. Deliquescent salts, or such as are very freely soluble in water, like nitrate of silver, must be obtained in solution in distilled water, which is then evaporated, and when the salt begins to separate, the syrupy liquid is continually stirred, heat being applied all the time, until finally a dry powder remains behind.

The granulation of medicines has been proposed by Dr. Thomas Skinner, who describes the method of preparing the granules as follows (*Amer. Journ. Pharm.*, 1862, p. 324):—

"The first step is to procure the material of good quality. The powders

need not be *very* fine in order to form granules, hence sifted ground powders may be used.

"1. *Making the Mass.*—The powder, however obtained, is put into a wedgewood mortar, and sufficient mucilage of gum Arabic is added to make a mass of so dry a consistence that it will readily crumble, and not be adhesive when rubbed against a coarse sieve, a condition soon learned by practice. The powder may also be made into a stiff paste, rolled into flat thin cakes, dried at a low temperature, and coarsely powdered or bruised in a mortar.

"2. *Granulating and Sifting.*—The process requires three sieves of the sizes of twelve, fifteen, and twenty meshes to the linear inch, and these are to be fitted together like a drum sieve, the coarsest being at the top, the finest at the bottom. The mass is now rubbed through the top sieve with the open hand, the sieves are then shaken as in ordinary sifting. The second sieve will retain the larger granules, the lower sieve the finer, whilst the pulverulent particles pass through below, and may again be treated after being damped in the manner as before. When the mass is formed into cakes and bruised, it is sifted in the same way, the finest particles being worked over again.

"3. *Drying, Coating, and Water-proofing the Granules.*—The granules by the first process are spread on paper and occasionally stirred till dry, or if the process is not injurious to some ingredient they may be dried in a metallic pan subjected to a moderate heat, with constant stirring, or more speedily in a current of dry hot air with occasional stirring. When perfectly dry they are placed in a mortar, or capsule of convenient size, and a sufficient quantity of strong tincture of tolu (℥iij to f℥j) in which any flavor desired has been dissolved, and stirred until the entire mass of granules appear to be equally coated and glossy, when they are again subjected to the drying process with constant stirring.

"Granules well prepared in this manner are compact, and to some extent insoluble in cold water; a desideratum, as they may be conveniently administered in that vehicle, without imparting to the water the slightest taste, smell, or color. The proportion of gum in these granules on an average is one-sixteenth, and that of the tolu too small to estimate, so that in calculating doses, but little abatement need be made for these excipients."

Granular effervescing salts have been used for some years past, many being made now in imitation of the composition of celebrated mineral springs. The effervescence is produced by bicarbonate of sodium, and either tartaric or citric acid, or both. The ingredients are first thoroughly dried, powdered separately, and then mixed; one-third to one-half their weight of powdered sugar is added, and when the whole is well mixed together, a sufficient quantity of alcohol is added to produce a mass that will crumble, which is then rubbed lightly through a No. 8 sieve, and rapidly dried upon trays placed in a warm room, after which the fine powder is removed by a suitable sieve, or the powder and granules are separated by sieves of different degrees of fineness, so as to present a uniform appearance. If skilfully prepared, these granules are uniform in composition, and dissolve readily in water, forming a pleasant effervescing drink.

PILLS AND BOLUSES.—Pills are small globular masses, of a semi-solid consistence, of the weight of half a grain to six grains, having as a base a powdery extract, etc., and rendered of the proper consistence by a syrup, pulp, etc. A bolus differs from a pill merely in being much larger, and generally less solid, weighing from six to twelve grains, and even more.

No form of medicinal agents is more frequently employed than that of the pill; not only because of the facility with which it is administered, and its

comparatively little taste, but because this form answers so excellent a purpose in the preservation of certain compounds.

The article, or articles, to be administered in this mode, should first be formed into a consistent, moderately-firm mass—sufficiently plastic to admit of its being moulded into shape, without adhesion to the moulding instrument, and yet of so firm a consistence as to retain the form given to it. To accomplish this, the following rules must be attended to:—

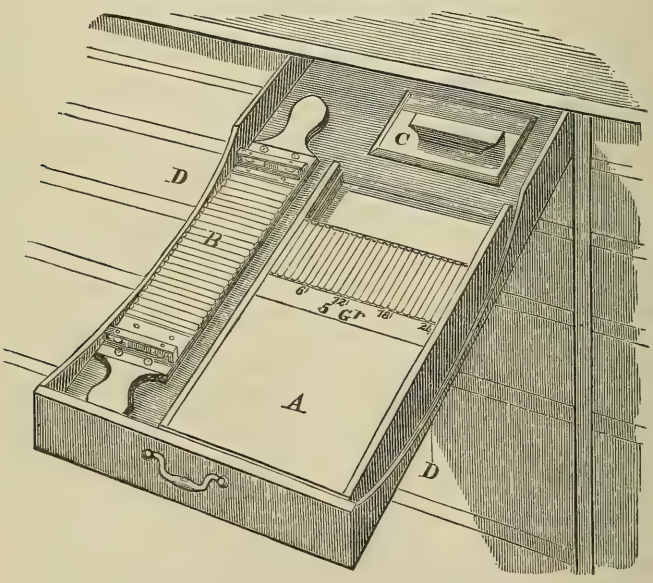
1. All the constituents, which can be pulverized, must be reduced to the state of a fine powder, and then thoroughly mixed together.

2. If soft ingredients enter into the composition they must be triturated with the harder articles, which thus serve as an intermedium.

3. No deliquescent salt should enter into the composition of officinal pills; otherwise they will become altered and decomposed.

4. The nature of the excipient should be suited to that of the constituents: thus, syrups are to be used for most vegetable powders; soap for fatty matters; calcined magnesia for copaiba and turpentine. In some cases, no excipient is required, as for most of the gum resins. Extracts can rarely be made into pills without the addition of some vegetable powder; even if they are of a firm consistence, extracts are usually hygroscopic, or part with the moisture contained in them so slowly, that pills made of such preparations alone will generally lose their globular shape when kept on hand for several

Fig. 11.



Counter Drawer containing a Pill-machine.
A. Pill-machine. B. Pill-cutter. C. Roller. D. D. Sides of the drawer.

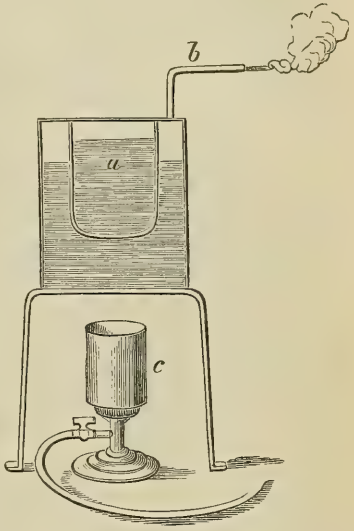
days. Salts which are easily soluble dissolve in the water contained in the extracts, and if the latter be soft and are prescribed in sufficient quantity with the former, the mass will liquefy, requiring then a considerable quantity of vegetable powder for forming a mass of good pilular consistence. Mucilage, which is often ordered in the formation of various pills, is only suited to those which are to be used in a short time after they are made; but is not

suited to such as are to be kept, because pills, into which it enters as an excipient, become so hard as to pass through the bowels almost unaltered.

5. The excipient should be gradually added, and the mass beaten and triturated till it is perfectly homogeneous.

6. When the pilular mass is properly made, the next operation consists in dividing it into pills of equal size, which is effected by dividing it with a spatula into morsels of the requisite weight, and rolling them between the fingers; or, in a more effectual, rapid, and cleanly manner, by means of a pill-machine. (See fig. 11.)

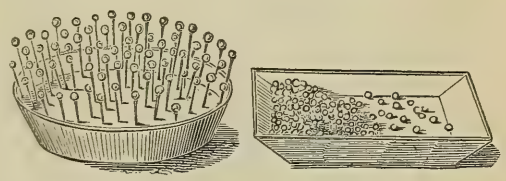
Fig. 12.



Water-bath, in which is placed the vessel, *a*, holding a solution of one part of gelatin in two parts of water. *b*. Waste pipe to carry off the steam. *c*. Gas burner.

7. To prevent any adhesion of the pills after they are made, and to prevent any disagreeable taste, they are, in most cases, covered with an inert powder: as, powdered liquorice-root, starch, orris-root, lycopodium, and frequently with magnesia; but this latter is wholly unsuited to some preparations—for instance, to pills of calomel—as decomposition will be caused. In Europe, they are often coated with gold or silver leaf; but this plan is seldom adopted in this country. Where, from their nauseous taste, or other circumstances, it becomes expedient to cover them, this is best doné by means of gelatin. Each pill, being stuck on the point of a thin wire, four or five inches in length, is dipped into a solution of gelatin (*a*, Fig. 12), so as to coat it completely; and the wire is then inserted into a pin-cushion, or a vessel containing fine sand (Fig. 13), and left till the gelatin is firm, which occurs in about a quarter of an hour, when the pill can be transferred to a pan (Fig. 14) to dry. Pills may be coated with sugar by covering them first upon a slab with a thin film of mucilage of gum Arabic or tragacanth, and immediately afterwards transferring them to another tile containing very finely-powdered sugar, or an intimate mixture of sugar and some gum Arabic; by giving the pills a rotary motion, pressing slightly upon them, the powder is made to adhere, and the coating will become dry if the rotary motion is continued for some minutes, in the presence of powdered sugar, upon a tile previously heated. The operation is more rapidly and uniformly performed by placing the pills previously moistened with mucilage in a hollow sphere containing powdered sugar, and rotating it rapidly for a few minutes. To prevent the coating of sugar from becoming discolored, the pills should be previously dried, and put in a warm place after the coating has been effected. On a large scale, pills are covered with sugar by rotating them continuously with moist sugar or dense

Fig. 13. Fig. 14.



Coating Pills with Gelatin.

Fig. 13. Vessel partly filled with sand, into which the pins holding the coated pills are stuck.
Fig. 14. Pan for holding the partially-dried pills.

syrup, gradually added, in a hemispherical copper dish, which is kept warm either by placing a suitable gas or other furnace beneath it, or by heating it with steam, until the moisture has evaporated and the covering of sugar has become smooth and glossy.

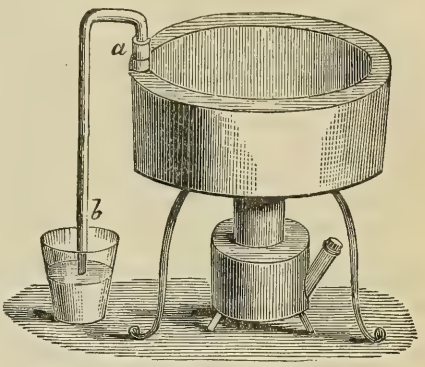
EXTRACTS.—This name is given to all products resulting from the evaporation of a solution, obtained by maceration, digestion, or decoction, or of an expressed juice. They are generally of a soft consistence, of a dark color, and of an odor and taste analogous to those of the substance from which they are derived. They have been classed according to the fluid employed in obtaining them; as watery, alcoholic, hydro-alcoholic, ethereal, vinous, acetic, etc. Some, however, are made from the expressed juices of plants, without any intermedium. The great object, in selecting one or more of these menstrua, is to employ that which takes up the largest proportion of the active ingredients of the root, bark, etc.; for the most advantageous solvent for one constituent may be wholly inefficient for others. Thus, alcohol is the proper menstruum for resinous substances, water for bitter extractive, vinegar or diluted acids for articles containing alkaloids, etc.; but, in some cases, an extract, containing all the active properties of the drug, can be obtained only by a combination or a succession of different solvents.

Extracts made by inspissating the expressed juices of plants have been considered to contain the active principles of the vegetable in a less altered form than by any other mode. But it has been shown that such is far from being the case, as, in some instances, the expressed juice does not contain the active constituents. Thus, in aconitum, much of the efficient principle is left in the residuum; added to which, in some extracts made in this manner, the medicinal ingredients are destroyed, or much deteriorated, in the evaporation. This is obviated, in a great measure, by allowing the expressed juice to evaporate spontaneously at ordinary temperatures, or by carrying on this process in vacuo. It has been found that extracts made by the latter method have more of the aroma and taste of the original article, keep better, and are more efficient. When inspissation of the natural juices of the plant is not practicable, a solution of the active ingredients is to be obtained by the use of certain menstrua—as water and alcohol—according to the substance to be acted upon. When the active principles are soluble in water, that fluid is often used as the vehicle of extraction; when resinous, alcohol is to be employed; when oleoresinous, ether will be found the best menstruum. When it is desired that all the principles soluble in the various menstrua should be reunited in the extract, the vegetable substance is first to be subjected to the action of one, and then to another, of the solvents; and the solutions thus obtained are to be evaporated to a syrupy consistence, then mixed together, and properly inspissated. These solutions are obtained by maceration, digestion, infusion, and displacement. Decoction is seldom to be employed, as it affords extracts containing much inert matter, and, of course, of inferior quality. Of late years the process of displacement has been much used in the formation of extracts, whatever the menstruum selected, as it affords a solution of the soluble principles in a much smaller quantity of fluid; and hence, prevents the injurious effects of too long an exposure to heat in the subsequent evaporation. (See Tinctures.)

With regard to the mode of evaporating extracts, much caution is requisite, as the various constituents of these bodies are very liable to undergo decomposition when exposed to the action of heat and atmospheric air. Sometimes the evaporation, especially of aqueous solutions, is performed over the naked fire; but this plan is liable to many objections, more particularly towards the close of the operation, when a small excess of heat may cause such a change in the character of the ingredients as to deprive

them of all useful properties; and it is from this cause that extracts are sometimes wholly worthless. Other and far better methods consist in the use of water and steam-baths (see Fig. 15), which prevent all danger of burning the extract. In the inspissation, when conducted in open vessels, it is of importance that the evaporation should be carried on rapidly, that the solution may be exposed to the action of the air for as short a time as possible. Evaporation in vacuo is always to be preferred, when practicable, as the process cannot only be carried on at a lower temperature, but the deteriorating influence of the air is avoided. The great objection is the additional expense it entails on the operation. Spontaneous evaporation has also been successfully employed; though necessarily slow, it affords excellent products. It is always advantageous to aid this process by employing artificial heat to a certain degree, by conducting it in a drying room or warm closet, and by causing a current of dry air, heated to about 100°, to pass over the surface of the evaporating fluid. Extracts made in this manner keep well, not undergoing the spontaneous decomposition so detrimental to extracts in general. When alcoholic solutions are to be concentrated, distillation should always be used, as not only can the alcohol be recovered, but, from the process being carried on out of the atmospheric air, one great source of injury to the product is avoided.

Fig. 15.



WATER-BATH.

This is made of tinned-iron or copper, in such a manner as to leave a space between the two rings forming its wall, into which water can be introduced through the orifice *a*. The temperature of the water can be raised by a stove heat, or by the spirit lamp (represented beneath), above 212° F., by causing the mouth of the tube *b* to dip into a cup of mercury.

The consistence of extracts varies according to their ingredients, and the purposes to which they are to be applied. In addition to the fluid extracts, properly so-called, three different degrees of consistence are recognized in the pharmacopœias: one quite soft, so as to require considerable vegetable powder for making pills; another sufficiently firm to require little or no vegetable powder for that purpose, and the third so hard as to be pulverizable. These different forms of extracts are useful because of the readiness with which they can be formed into pills or powders, when prescribed. But, in many cases, extracts undergo a change, some becoming soft and others hard; and one of the difficult parts of an apothecary's business is to keep these preparations of an uniform consistence. They should be preserved in bottles or glazed earthenware pots, protected as much as possible from the action of the air. Notwithstanding every precaution that can be taken, a diminution of activity will, sooner or later, take place; hence, these peparations should be examined from time to time, and, if necessary, be renewed. The safest plan is to renew those made from recent plants once a year.

To facilitate the dispensing of narcotic extracts in powder, the German Pharmacopœia directs them to be thoroughly mixed with some powdered dextrin in a warm porcelain dish; the mixture is then exsiccated at a temperature not exceeding 122° F., and while still warm triturated into an uniform powder with sufficient dextrin to make the weight of the powder equal to twice the weight of the extract employed. Of these powdered extracts the pharmacist dispenses double the quantity of the narcotic extract ordered by the physician.

Confections, Conserves, Electuaries.—As there is no essential difference in these preparations, they may be advantageously treated under one head. They are simple and compound: the first being merely a mixture of a recent vegetable substance and sugar, beaten into an uniform mass; the second, of the same substances, but in greater numbers. In consequence of the greater simplicity of prescriptions, of late years, the number of preparations of this kind have greatly diminished, and they are employed more as vehicles for other medicines than for their own remedial powers. The following rules are to be observed in their preparation and preservation:—

1. The powders to be incorporated are to be in a state of fine division, and the pulps used, perfectly homogeneous, and not too fluid.

2. The mixture should be intimate, and the consistence of the resulting mass should be solid enough to prevent a separation of the ingredients; and yet sufficiently soft to allow of its being swallowed without being masticated.

3. If the mixture swells up, and gives off carbonic acid, it is to be well rubbed in a mortar, to break down any sugar that may have crystallized, and any hard lumps that may have formed, so as again to form an uniform mass.

4. They should be preserved in earthenware or porcelain pots, well covered, and kept in a moderately moist situation.

Pulps are simple medicinal preparations, of a soft consistence, formed of the tissues of vegetable substances, or some of their thin parts; they differ from extracts in containing insoluble as well as soluble principles. They are to be prepared by rubbing the fruit, or other articles from which they are made, through a wire sieve, so as to separate the vegetable fibre from the soft parts by which it is surrounded. When the fruit is hard or dry, it is to be softened by means of boiling water, previous to expression through the sieve. The expressed pulp, if not sufficiently consistent, is to be properly evaporated. Pulps are to be preserved in the same manner as confections. Very few of these preparations are now used in medicine.

Syrups.—These are liquid, viscous medicines, consisting of a concentrated solution of sugar in aqueous fluids.

All fluids susceptible of dissolving more than their weight of sugar can be formed into syrups. These syrups are of two kinds: simple and compound. Simple syrup is prepared by dissolving sugar in pure water; and compound syrups are obtained by dissolving the sugar in solutions of various substances, formed by infusion, decoction, expression, etc. All medicinal syrups are now made from refined sugar; they require to be perfectly filtered, so as to be limpid, and they should have a certain viscidity of consistence, and be capable of being preserved without entering into fermentation, or crystallization. These latter properties depend on their not containing the proper proportion of sugar—an excess being deposited in a crystalline form, and a deficiency causing the solution to run into fermentation. The best mode of ascertaining the proper point of concentration is by means of the specific gravity at different temperatures. The specific gravity of well-prepared simple syrup is, when boiling, about 1.261, and when cold 1.317; but the proper degree of concentration is more readily obtained by means of Baumé's hydrometer (see pages 34, 37). This should stand at about 30° in boiling syrup, and at 35° when it is cold. Other modes are also employed, which, although sufficiently accurate in the hands of an experienced operator, are not to be generally depended upon. They are derived from the degree of viscosity acquired by the syrup, as shown by the time required for the parts of a drop to re-unite, and by the length of the thread which a drop will produce before detaching itself, when poured from a spoon or ladle. When the

syrup, on cooling, presents a crystalline pellicle, it is a proof that the evaporation has been carried too far; but, when the sugar has been mixed with an acid, or when the process has been too much prolonged, the sugar loses its power of crystallization, however much the syrup is concentrated, and, therefore, does not form a pellicle.

Several officinal syrups are directed by the pharmacopœias to be made without heat, by agitating the liquid with the sugar in the form of a granular powder, and by a similar method, simple and other medicated syrups have been prepared. The sugar is placed in a suitable percolator, near the bottom of which a flannel strainer has been securely fastened; the water or solution is now added and left in contact with the sugar for half an hour, after which time the liquid is drawn off drop by drop. With a proper arrangement of the apparatus, and the requisite care to make the liquid percolate slowly through the column of sugar, a good dense syrup will be obtained. Should some of the sugar have escaped solution, the last portions of the syrup will generally be found of less density, and should be returned to the percolator until all the sugar is dissolved, after which the different portions of the syrup should be thoroughly mixed together.

The compound syrups, if kept any time, are liable to various alterations, depending on their nature, and the degree of care used in their preparation. Thus, the acid syrups, as the syrup of lemons, when too concentrated, deposit a copious white precipitate; and in some cases, solidify entirely. By heating them, they again become liquid; but again let fall a precipitate on cooling. This deposit is analogous to grape sugar, and is caused by the action of the acid on the sugar. When the sugar bears too small a proportion to the liquid, syrups are apt to run into fermentation. Even when the sugar is in proper proportion, this change often takes place if the solution contains much amylaceous or extractive vegetable matter. Even when too much concentrated, they may also undergo this change, from part of the sugar being deposited in a crystalline state; and the crystal, attracting the sugar necessary to the perservation of the syrup, reduces its strength, and renders it liable to the same change as though it was originally too weak.

Syrups, especially those containing the juices of fruits, should be bottled whilst hot, and, when cold, well stopped and sealed; and these, as well as all other kinds, should be kept in a temperature not exceeding 60° F. Various plans have been devised to preserve syrups; but the best is to prepare them only in such quantities as will be used within a short time. The addition of chlorate of potassium, as advised by Maculloch, and of sugar of milk, as advised by Chereau, has proved useful; Durand recommended to add to each pint of syrup about one drachm of Hoffmann's anodyne, which appears to have the property of arresting or preventing any tendency to fermentation; and Mr. J. B. Moore has lately suggested to replace a portion of the sugar by glycerin equal to one-fourth the bulk of the finished syrup.

Mellites, or Honeys, are liquid, viscous medicines, somewhat analogous to syrups, but in which the sugar is replaced by honey. Like syrups, they may be divided into simple and compound, or medicated. Their preparation, medical properties, modes of administration and preservation, are very similar to those of the syrups, and do not, therefore, require further notice. Though formerly much used, they are now seldom prescribed, as they are often found to disagree with the stomach, especially if made with the honey of commerce in an unpurified state.

Infusions are aqueous solutions, made by treating vegetable products with cold or hot water, but never carried to ebullition. They are seldom made by the apothecary, who merely furnishes the medicinal ingredients;

whilst the preparation is usually confided to the nurse or other attendant on the patient. This plan, although more economical than when the preparation is compounded by the apothecary, often renders the prescription of the physician of little avail, from the infusion being erroneously made. They are generally prepared by pouring boiling water on the ingredients, and macerating in a tightly-covered vessel until the liquid cools; or the vessel is kept for some time at a low heat before a fire. In most cases, an infusion should be strained or filtered before being used; but, in general, nurses are content merely to decant them for use. The vessels, in which infusions are made, are usually of stone or earthenware, and polished metallic vessels may be used, provided they are not acted upon by the infusion. Infusions are mostly made for extemporaneous use, as they are exceedingly liable to decomposition, and consequently cannot be kept long without spoiling. They may, however, be preserved for some time by pouring them, whilst hot, into bottles so as to fill them, and forcing in stout corks. If the operation be properly performed so as to perfectly exclude the air, the infusion will keep for some months. An infusion made with cold water, by the process of displacement, has less tendency to spoil than one made in the usual manner with hot water.

Decoctions differ from infusions in the circumstance that the substance to be acted upon is subjected to the solvent action of the menstruum at its boiling point, and continued for a longer or shorter period, according to the solubility of the substance, or its constituents. By decoction, all the principles soluble in water can be obtained; and even many substances not properly soluble in that fluid are diffused through it, and held in suspension. On the other hand, many substances are injured or destroyed by decoction, especially when their active principles are volatile, and when, during ebullition, chemical changes take place, by which the active constituents are rendered insoluble, or are decomposed. In fact, protracted ebullition is seldom required since the process of displacement has become known, as it has been found that water at a common temperature, by this method, will exhaust most vegetable substances more effectually than the same fluid at 212° by decoction. There are some exceptions; as all emulsive preparations, and certain gummy solutions, require ebullition. As in the case of infusions, decoctions are only made extemporaneously, for they readily decompose by keeping. They should be prepared in closed vessels, and generally in those of earthenware. Copper vessels should be used with great care, as many vegetable decoctions corrode them, especially if permitted to cool in them. Iron vessels are not to be employed when the decoction contains tannin or gallic acid. Zinc is very rapidly acted upon by many vegetable substances, and should, therefore, be avoided. In all cases, the vessels employed should be deep and narrow, rather than broad and shallow, to obviate as much as possible the influence of the air on the product.

Tinctures are solutions of vegetable, animal, and, in some cases, of mineral substances in spirituous fluids. The spirit employed is alcohol, either diluted or undiluted, either pure or medicated; and, in some cases, ether. The form of tincture is one much used in pharmacy: it presents the active principles of drugs in a small volume; it can be preserved in an unaltered state for a long time; and is, in most cases, well adapted to unite with other substances in extemporaneous prescriptions. Tinctures are made by maceration, or by displacement.

Maceration is an operation in which, by the action of a fluid at common temperatures, continued for a certain length of time, a solution of the principles of an organic substance in that fluid is obtained. As before stated, in

making tinctures, the strength of the spirituous menstruum employed is varied according to circumstances. If the substance to be acted upon is resinous, alcohol is to be employed; if it contains also matters soluble in water, and insoluble in pure alcohol, this article, in a diluted state, is to be used. The period of maceration varies from a few hours to several weeks; and, during the process, the vessel in which it is performed should be kept closed, to prevent evaporation. When the spirit has remained upon the substance for the directed period, it should be decanted, instead of being left, as is too often the case, standing on the dregs until it is used. This practice is erroneous, and may be attended with evil consequences; for the characters and properties of a tincture which has been suffered to remain too long in contact with the solid ingredients, will often be found to differ considerably from what they would have been if the process had been terminated at the indicated time. When a tincture is made by maceration, it requires to be filtered, after being separated from the dregs; otherwise, it will be turbid, and deposit much insoluble matter on standing.

Displacement.—This process is of comparatively late introduction in the making of tinctures, etc. For a great proportion of these preparations, it is decidedly to be preferred to maceration; but for others it has not proved so satisfactory. Mohr and Redwood observe, on this point:—

"When tinctures are made in large quantities, displacement is never likely to supersede maceration, on account of any practical advantages it may possess. If the prescribed directions be duly attended to, the process of maceration is unexceptionable. The process is more simple than the other; the mode of operating is more uniform, it is, in fact, always the same; it requires less of skill and dexterity in conducting it; it requires less constant attention during its progress, which, in operating on large quantities, is a consideration; and, finally, the apparatus required is less complicated.

"When only small quantities of tincture are made at a time, and kept in stock, the adoption of the process of displacement will often be found convenient and advantageous. It offers the means of making a tincture in two or three hours, which, by the other process, would require as many weeks. The process being thus completed in so short a time (for the quantity contemplated might be made at one operation), it would not be so likely as the other to experience neglect during the performance of it, or a deviation from the prescribed instructions; the product would, therefore, be more uniform. Finally, in many cases, the tincture and spirit may be removed from the dregs more completely, in operating on small quantities, by this process, than by the other."

These remarks are scarcely applicable now to this country, where the process of percolation has been found to possess many advantages if properly conducted, even on a very extensive scale. The United States Pharmacopœia contains the following observations and practical details of the process, which will always insure an unobjectionable product:—

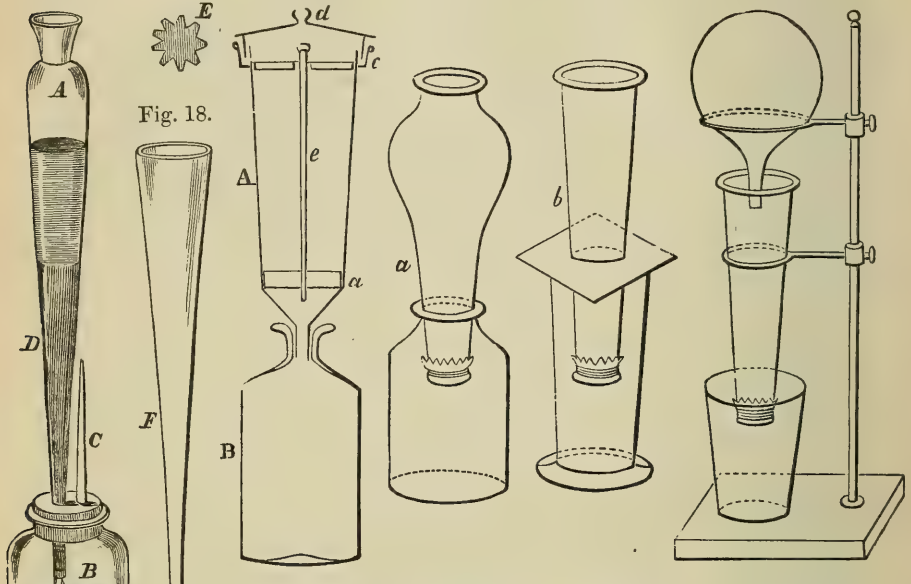
"The kind of filtration known as *percolation* or the *process of displacement*, directed in this Pharmacopœia, consists in subjecting a substance or substances, in powder, contained in a vessel called a *percolator*, to the solvent action of successive portions of a menstruum, in such a manner that the liquid, as it traverses the powder in its descent to the recipient, shall become charged with the soluble portion of it, and pass from the percolator free from insoluble matter.

"When the process is successfully conducted, the first portion of the filtered liquid, or *percolate*, will be nearly saturated with the soluble constituents of the substance treated; and, if the quantity of menstruum be sufficient for its exhaustion, the last portion will be nearly destitute of color, odor, and taste.

"The percolator should be either conical or nearly cylindrical, with a conical termination at the smaller end, and provided internally with a porous or colander-like partition or diaphragm, resting transversely immediately

VARIOUS FORMS OF DISPLACEMENT APPARATUS.

Fig. 16. Fig. 17. Fig. 19. Fig. 20. Fig. 21. Fig. 22.



DISPLACEMENT APPARATUS.

DISPLACER FOR VOLATILE LIQUIDS.

GLASS DISPLACER.

GLASS DISPLACER.

CONTINUOUS DISPLACEMENT.

Fig. 16. Apparatus for tinctures. *A*. The glass adapter, closed by a diaphragm at the lower end, on which is placed some clean sand. The adapter is fitted by a perforated cork into the mouth of the bottle *B*. *C* is a tube drawn to a capillary point to permit the escape of air.

Fig. 19. *A* is an ordinary tin percolator having the rim *c* soldered around it, to form a water-joint when the lid *d* is placed in it. *a* is a perforated diaphragm, and *e* a tin tube, through which the atmosphere of the bottle *B* communicates with that above.

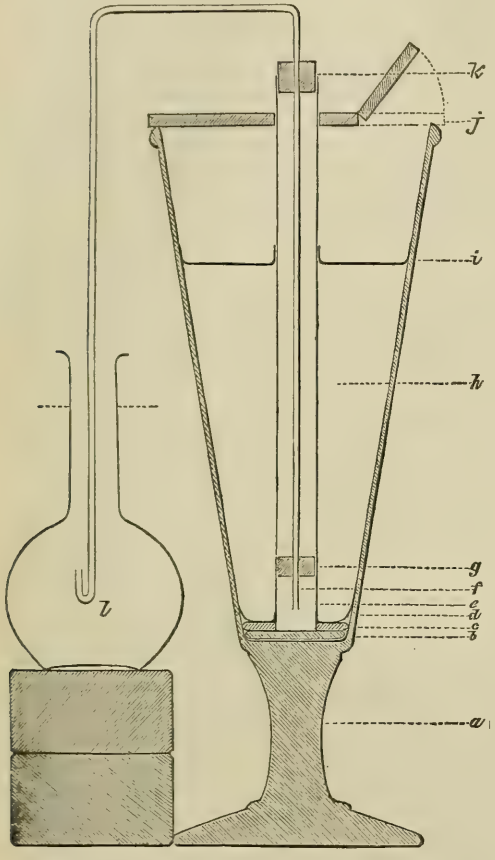
Figs. 20 and 21. Common glass chimneys with muslin diaphragms across the lower end.

Fig. 22 shows an arrangement for continuous displacement. Whenever the fluid in the percolator sinks below the mouth of the inverted bottle, the contents of the latter will run out and maintain the supply.

above its neck, for the support of the powder. Ordinary glass funnels, varying in capacity from one to eight pints, are to be preferred for most of the operations requiring percolation in this Pharmacopœia; but percolators may also be made of earthenware or tinned iron, especially of the latter material, when required of large size. Tinned iron, however, should not be used when the liquid acts chemically on the material. In the several formulas in which percolators are used, their form and material will always be designated, when there is a preference in these respects. In cases in which these variations of the instrument are indifferent, the term percolator simply will be employed. When a funnel is used, a circular piece of muslin or of lint, pressed into the neck by means of a cork with notched sides, forms a good diaphragm; but in all cases a similar piece of muslin, moistened slightly with the menstruum, should be interposed between the diaphragm and the powder, to prevent the passage of the fine particles of the latter.

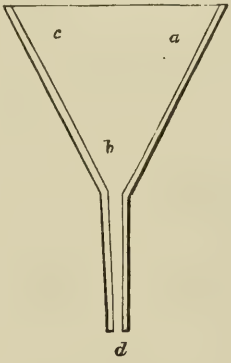
"The substance to be subjected to percolation, after having been reduced by sifting to a uniform powder, of the fineness indicated in the formula, is to be put into a basin with the specified quantity of the menstruum, and the two rubbed together until the powder is uniformly moistened.

Fig. 23.



GLASS PERCOLATOR WITH SIPHON.

Fig. 24.



SECTION OF A FUNNEL DISPLACER.

Fig. 25.

CYLINDRICAL GLASS PERCOLATOR.

Fig. 23 shows an ornamental glass displacer, designed by Dr. Squibb, which appears to be particularly adapted for tinctures. In the bottom of the percolator *a* is placed a flat disk of flannel *b*; the glass well-tube *e* is surrounded at its base by a close-fitting disk of flannel *c*, and this is covered by a disk of filtering paper *d*; upon this the material *h* is packed in coarse or fine powder, and covered by a piece of muslin *i*. The glass siphon *f* is inserted in the well-tube, and held in position by rubber disks or stoppers *g* and *k*. After the material has been sufficiently macerated with the menstruum, the siphon is started by suction at the turned-up end, and the flow of the liquid, to be collected in the receiver *l*, is regulated by raising or lowering the siphon. The percolator is covered by the rubber disk *j*.

Fig. 24 is a funnel displacer or conical percolator, the section of which should form an equilateral triangle.

Fig. 25. A cylindrical glass percolator, adapted for astringent and other drugs which cannot be exhausted in metallic percolators. The diaphragm may be replaced in the funnel and cylinder by a plug of carded cotton inserted in the neck, and if the material is to be macerated in the percolator, the lower orifice is closed by a cork, and the top covered by a disk of rubber. Percolators of this kind are made of different dimensions; the above represents a syringe pattern displacer, which is suitable for small operations.

"A portion of the powder is now to be carefully placed upon the diaphragm, prepared as above directed, and pressed gently until the muslin, resting against the sides of the percolator just above the neck, is covered with a uniform layer. The remainder of the powder is then to be trans-

ferred to the percolator, and compressed evenly and firmly, and the levelled surface covered with a circular piece of moistened muslin or paper, so that the liquid poured upon it may penetrate equably, and not disarrange the powder.

"The percolator being now properly supported, with its neck in a bottle previously marked for the quantity or quantities of liquid to be percolated, the menstruum is to be poured on, until the space above is nearly filled; and a layer of it must be constantly maintained above the powder, so as to prevent the access of air to its interstices, until all has been added, or until the requisite quantity of percolate has been obtained.

"If the fineness of the powder and its arrangement in the percolator have been properly attended to, the percolate will pass out by drops, with greater or less rapidity, according to the size of the percolator; but if, by reason of accidental imperfection in the powder or in the packing, the liquid pass more rapidly than this, the neck of the percolator should be obstructed by means of a cork until the requisite slowness has been attained.

"When the dregs of a tincture are to be subjected to percolation after maceration with the menstruum, the liquid portion should be drained off, the solid portion packed in a percolator, as before described, and the liquid gradually poured on until all has passed the surface, when immediately a sufficient quantity of the original menstruum should be poured on to displace the absorbed liquid, until the prescribed quantity of the tincture has been obtained."

When operating on larger quantities of material, or when the object is to obtain the percolate in as concentrated a state as possible, particular attention must be paid, 1, to the uniform degree of fineness of the powder, 2, to moisten it uniformly with a portion of the menstruum, so as to scarcely destroy its pulverulent condition, and 3, to pack the dampened powder uniformly in the apparatus. The degree of pressure necessary for packing different material is to be learned from experience in each case. It may be observed, however, that all powders require much firmer packing in conical than in cylindrical percolators, and powders which are obtained from ligneous tissues mainly must be packed very firmly in all cases, while powders which imbibe the liquid freely, or are liable to much swelling, require a lighter pressure in packing than the former. If the powder is to be macerated with the menstruum previous to percolation, it should be packed carefully, as directed above, then the necessary quantity of the menstruum is poured upon it, and when the liquid has disappeared from the surface, or if it should commence to drop, the lower orifice of the percolator is closed with a cork, or by means of a stopcock, and the top is covered with a plate of glass or disk of rubber to prevent evaporation. After the maceration has been completed, the lower orifice is opened, more menstruum is added, and the percolation finished in the usual manner.

That the dampened powder has been properly packed may be readily observed in a glass percolator after the menstruum has been poured on; it should then descend slowly but uniformly on all sides. If it descends more rapidly on one side, or in irregular lines, the powder is either not uniform, or it has not been properly dampened or properly packed, or these three conditions have not been well attended to, and the process will, therefore, be a failure to a greater or less degree, in proportion to the deviation from the rules laid down above.

In some operations, especially those on the large scale, it is found useful to promote the displacement by pressure. This may be produced simply by supplying the solvent through a tube several feet high, adapted to the upper end of the cylinder, and terminating at the top in a funnel. A still better method, as involving the use of less spirit, consists in the use of compressed air. By means of a condensing syringe, or a column of water or

mercury in a tube, air is condensed in the bottle below; and, when the material and spirit have been introduced into the percolator, the top is tightly secured by a screw, and the compressed air admitted by a stopcock. This method answers excellently on the small scale with a column of mercury.

Resinous and other substances which are almost entirely soluble in the alcoholic menstruum, present some difficulties by obstructing the passage of the liquid. Tinctures of such substances are best prepared by maceration, or, if percolation is preferred, the material is to be reduced to a uniform powder, and this mixed with at least an equal bulk of fine, well-washed sand, when the soluble portion is readily exhausted by percolation.

The solution which first passes through in this process is always in a state of high concentration. In general it is a simple solution of the soluble ingredients of the crude drug in the fluid employed. But sometimes the solvent, if compound, is resolved into its component parts; and the fluid which passes through is only one of these, holding the soluble parts of the drug in solution. Thus, if diluted alcohol be poured over the powder of myrrh, in the cylinder, the fluid which first drops into the receiver is a solution of oily consistence, composed of resin and volatile oil dissolved in alcohol. And if powder of galls be acted on in like manner by aqueous sulphuric ether, two layers of fluid are obtained—a highly concentrated solution of tannin in the water of the ether, and a weak solution of the same principle in pure ether.

Displacement is accomplished, in the manner here described, with little or no intermixture of the liquid above, with that which is below, in the pulpy mass. If, after the pulp has been allowed to drain till drops cease to fall, the quantity of spirit retained by it be ascertained—that is, by subtracting what has dropped from what has been used to make the pulp—and the same quantity be poured gently over the mass, repeatedly, as soon as the dropping caused by each successive addition ceases, a series of liquids will be obtained by the simple displacement of one another in the pulp; and most of the spirit used may be obtained by pouring over the pulp the same quantity of water. Hence, one of the many advantages possessed by this method of making tinctures, over the ordinary mode by maceration and expression, is that no part of the tincture is lost by being left behind in the residuum.

Even when a strict attention is paid to the prescribed formula, the resulting tinctures may be found to vary in medicinal strength; for any variation in the activity of the drug will influence the tincture. These preparations, although retaining their properties better than other vegetable solutions, will gradually undergo changes, from age and exposure, either losing their color, depositing insoluble matter, or, in some cases, as in that of the tincture of kino, becoming less astringent, and gradually gelatinizing, particularly if a weak alcohol has been employed.

Repercolation or *fractional percolation* is a rather complicated adaptation of the process just described, and its object is to avoid evaporation in the preparation of fluid extracts. It is based on the fact that the first portion of the alcoholic percolate contains a much larger proportion of the medicinal principles than the later ones, which may be used with advantage for dampening and percolating a fresh portion of the powder, in the place of alcohol. If sixteen troyounces of material are to be made into an alcoholic fluid extract, the fine powder is divided into three equal parts, and the first part exhausted by alcohol in the manner described before; the last portions of alcohol may be displaced by water. The percolate is collected in fractions of four, two, three, and six fluidounces, the first fraction (four fl. ounces) being reserved, the second (two fl. ounces) being used for dampening the second part of the powder, and the third and fourth fractions for percolating; about two ounces of alcohol may now be used, and finally water to expel

most of the alcoholic liquid. This second percolate is again collected in four fractions of five, two, three, and three fluidounces, of which the first (five fl. ounces) is reserved, and the others employed for exhausting the remaining third part of the powder, in precisely the same manner as the second part was exhausted, this last percolate being collected in two fractions of seven and three or four fl. ounces, the latter being set aside to be used as so much alcohol at the next making of this fluid extract. The three reserved fractions (four, five, and seven fl. ounces) are then mixed, and will now represent in each minim one grain of the powder.

The process appears to be by far too complicated for general use, and since the last pharmacopœia has greatly simplified the processes for the fluid extracts, many of the arguments in favor of repercolation do not apply to them.

Wines are tinctures in which the menstruum is wine. Sherry wine is ordered to be employed by the United States and British Pharmacopœias. The solvent power of wines on vegetable products depends on the water and alcohol they contain; the other principles found in them are injurious to it as an excipient; the mucilage disposing to fermentation, and the coloring matters and tannin often decomposing the active principles of the vegetable substances dissolved in it. On this account, these preparations are now going out of use, and mixtures of alcohol and water, of the proper strength, substituted as solvents. These can always be made of definite strength, which can seldom be attained when wine is used.

Medicated wines are made by maceration or displacement. In whatever way they are prepared, they are very liable to undergo a change, and hence should be made in small quantities only, and be kept in well-closed bottles, and in a cool and dark place.

Vinegars are solutions of certain parts of vegetables in distilled vinegar or diluted acetic acid. Few of these preparations are officinal; but, in some cases, the state of solution in distilled vinegar is the best that can be desired, at least as far as energy is concerned. This is particularly the case when the activity of the medicinal substance depends on the presence of an alkaloid, which, by uniting with the acetic acid, forms a salt that is readily soluble; and, therefore, may be more perfectly extracted than by other menstrua.

As even distilled vinegar contains vegetable matter, rendering it liable to decomposition, it has been found advantageous to substitute acetic acid, properly diluted. In consequence of this liability to become decomposed, medicated vinegars should be made in small quantities, and be renewed at short intervals. In many cases, the acetates of the vegetable alkaloids, dissolved in water or diluted alcohol, may be substituted for medicated vinegars, producing all their good effects, and attended with but few of their disadvantages.

Mixtures are liquid medicines containing two or more ingredients, generally of extemporaneous preparation, though a few are recognized as officinal. They are in very constant use in the administration of remedies. The ingredients which usually enter into their composition are salts, and other solid bodies which are soluble, or readily miscible with aqueous fluids; also tinctures, spirits, syrups, decoctions, etc.

In making a mixture, the objects to be attained are the perfect solution of the soluble ingredients, and an equal diffusion of those which are not so, through the excipient, as well as the thorough admixture of all the constituents, so that each dose shall be similarly composed. The combination of articles in a mixture is effected either by agitation, or by rubbing the in-

gredients together in a mortar. When volatile substances enter into a mixture, they should be added last. Insoluble powders, which are easily diffused through a fluid, may be mixed with the liquid ingredients, by merely shaking them together in the bottle. When, however, powders do not mix readily with liquids, they must be triturated in a mortar with a small quantity of the fluid, gradually adding more, until they are of the consistence of thin paste. In the same manner, extracts and electuaries are to be rubbed down with a portion of the excipient previous to putting them in the bottle.

Draughts differ from mixtures only in being designed to be taken at a single dose. This is not a common mode of prescribing medicines, but in some cases it is advantageous, as when it is wished to apportion the doses of a medicine accurately, or when the medicine is liable to undergo a change from the action of air.

Emulsions are mixtures containing substances of an oleaginous or resinous nature suspended in aqueous fluids by the aid of gum, syrup, yolk of egg, or any viscid matter. It is a mechanical compound, and the union of its ingredients is promoted and rendered more or less permanent by the addition of an alkali. Emulsions are made by triturating certain oleaginous seeds with water, or by mixing the oil procured from them with the necessary ingredients; and also from gum resins in the same manner. Sometimes they are made with oils and an alkali. In making an emulsion of the oils or oleoresins with mucilage, the former should be gradually added to the latter; by adding the mucilage to the oil, a good emulsion cannot be easily formed. Mucilage is preferable to an alkali in making many emulsions, as those with castor oil or copaiba; an alkali is preferable in forming an emulsion of almond or olive oil; but an emulsion formed with either of these agents alone will often separate, if the other be added. The presence of soluble salts in an emulsion is also apt to cause a separation of the oil. Much spirit will produce the same effect in emulsions made with mucilage, and an acid in those made with an alkali. Some substances cannot be formed into good emulsions either with an alkali or with mucilage. This is the case with spermaceti and oil of turpentine. In such cases the yolk of an egg is the best agent for effecting the admixture, by rubbing down the ingredients in a mortar.

Volatile oils are most readily made into an emulsion by being previously mixed with one of the fixed oils. Scammony is formed into an emulsion by means of milk; but resin of jalap will not unite with this fluid, and is best emulsionized by triturating it with almonds and water. Emulsions should be made with cold water, and strained.

Mr. W. Procter, Jr., gives the following valuable directions for making emulsions (*Amer. Journ. Pharm.*, xv. 11): "In making an emulsion, a good deal depends even on so slight a circumstance as the form and material of the mortar and pestle. An emulsion may, indeed, be made in a smooth porcelain mortar, but the process is unquestionably more successful and easy in a Wedgewood one, and still more so in the old-fashioned marble mortar, which is generally used to this day by the druggists and apothecaries in England. But whatever be the composition of the mortar, it is essential that it should be perfectly *round* at the bottom; not flattish, as is sometimes the case; and the pestle should be so formed as in its motion to leave no hollows between its base and the concave surface of the mortar. Otherwise, the emulsion will most probably be imperfect. The mucilage or other viscid substance should always be put into the mortar before anything else: the oil (or balsam) may then be very gradually rubbed in, taking care not to add it more quickly than it can be subdued by the pestle; and if, during this part of the manipulation, the mixture should begin to assume a breaking or curdling appearance at the edges, a few drops of water must be immedi-

ately incorporated with it, before adding the remainder of the oil. For want of this precaution, I have often known an emulsion suddenly to lose its tenacious consistence in the mortar, and it is then in vain to endeavor to restore it. After the oil is thoroughly incorporated, some care is requisite to avoid separating it again by too hasty an effusion of the water or other fluid of the mixture; and, if any alcoholic or acid liquid is to be added, it must be at the very end of the process. Indeed, an acid liquid, even a slightly acescent syrup, will often entirely destroy the emulsion. Mixtures of copaiba are frequently spoiled by the addition of sweet spirit of nitre; which might be avoided by first diluting it with one or two portions of water."

Mr. J. W. Forbes has proposed the following new method for preparing emulsions of volatile oils (*Amer. Journ. Pharm.*, 1872, 61), illustrating it by an emulsion containing in two fluidounces one fluidounce of oil of turpentine.

"First. Pour the turpentine into a two-ounce vial, and shaking so as to coat the inside of the vial with a film of turpentine; this is to prevent the action of the moisture usually present.

"Secondly. Add ℈j powdered acacia, and mix thoroughly with the oil.

"Lastly. Half a fluidounce of water is added, and the whole is well shaken. A perfect emulsion is the result, requiring less time for its preparation than to read the foregoing directions. The bottle may then be filled up with mucilage, or, according to my experience, a better product is obtained with water simply.

"The deviation from the letter of the law in regard to the gum strength of the emulsion needs no apology to the practical pharmacist, as the sole object in view is to emulse the oil, and it will be found that ten grains to the fluidounce of emulsion will afford a product superior in all respects (especially in fluidity) to one containing more gum, and more nearly approaching the peculiar characteristics of that most perfect of all emulsions —cow's milk.

"An emulsion of turpentine prepared in this manner and allowed to stand some time, shows not the least separation of its oil, but floating on the surface of the water is a stratum of a true 'cream,' which, like its prototype, requires but slight agitation to mix thoroughly with its substratum."

In precisely the same manner ether and chloroform may be emulsionized; the "cream," in the latter case, being heavier than water, subsides, but is diffused in the aqueous liquid with equal facility.

MEDICATED WATERS.—This term is used to designate all preparations of water impregnated with volatile medicinal substances. It includes the DISTILLED WATERS of other pharmacopœias, and is a more appropriate designation, because many of the latter preparations are not distilled waters, but are made with an essential oil united to the water by trituration or agitation, no distillation being employed.

By Distillation.—There are two modes of obtaining medicated waters by this process: 1st, by distilling the water directly off the substances; 2d, by employing the essential oil already separated from the vegetable, and distilling it over with the water. In most cases, where the fresh plant can be procured, it is to be preferred. Many of these substances lose their volatile oil and fragrant properties by drying; but, in some instances, the oil is retained, notwithstanding desiccation. Many which lose the oil by the process of drying retain it fully for a length of time, when preserved by being beaten into a pulp with common salt; and, when kept in this state, afford very good distilled waters.

The material which supplies the volatile oil is, in general, simply mixed

with the water in a state of fine division; and this is probably the best mode, where heat is used in such a way as to exclude the risk of empyreuma. If it does not require to be finely divided, as in the case of fresh leaves and flowers, it may be put conveniently into a net-bag, which, suspended in the middle of the still, may be withdrawn with facility, when its contents are exhausted. Some manufacturers use steam, instead of water, for obtaining distilled waters: that is, the material to be distilled is spread over a fine gauze partition, or a plate perforated with numerous small holes, and steam is driven through the mass.

When the vegetable substance to be exhausted is a bark, wood, or other solid matter, it must be reduced to a state of moderately fine division. But this is not generally necessary in the case of leaves or flowers, because boiling water breaks down the cells in which the volatile oil is contained. When leaves, however, are thick and leathery, as in the instance of the cherry-laurel, the process is facilitated by chopping them down; and, in most cases, where leaves are large, it is difficult to get a sufficient quantity into the still without cutting them into pieces. In preparing the finer kinds of distilled waters, it is necessary to clean the materials carefully, to remove all decayed leaves or flowers, or those infested by insects, and sometimes also to separate the leaf-stalks, or the green claw of the petals.

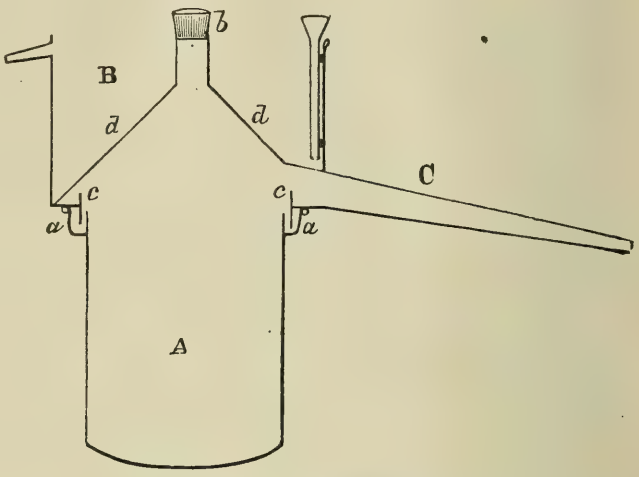
Heat may often be applied directly to the vessel; but in this way empyreuma is apt to be occasioned, especially in large operations, in consequence of the solid matters remaining fixed at the bottom. To avoid this, it is usual to apply the heat, in limited operations, through the medium of a solution of chloride of calcium, which raises a temperature between 212° and 270°, according to its strength—or by means of an oil-bath, with a thermometer to regulate the temperature; and, on the great scale, it is best applied by means of steam admitted under pressure into a space surrounding the still. Another cause of the empyreumatic taint of some distilled waters is the formation of a species of mucilaginous substance, at the expense of the volatile oil. This substance, which forms chiefly when the distillation is pushed too fast, or too far, and is seen encrusting globules of volatile oil, undissolved in the water, is apt to deposit itself on the side of the still, above the boiling materials, where it is afterwards decomposed by the heat. This fact explains the well-known observation, that the finest distilled waters are obtained by gentle distillation, and by abstaining from complete exhaustion of the materials. A still greater improvement is to prepare them with the vacuum-still, in the same way as is now often practised in making extracts.

The other mode of obtaining medicated waters by distillation is by employing the volatile oil, previously separated from the plant, for the vegetable itself. This mode of operating affords a product less liable to change than the above; but it is not so aromatic as when obtained from the fresh plant.

Distilled waters, however carefully they may be kept, are apt, sooner or later, to lose their aroma; and some of them even become mouldy, and acquire thereby an unpleasant odor. They have been thought to keep better with the addition of about a fortieth part of rectified spirit; which may be either put into the still with the water, or added afterwards to the distilled fluid. But the advantages of this addition, although sanctioned by the authority of several pharmacopœias, are doubted by practical men. It is believed that the most effectual precaution for preserving them is to prepare them with extremely pure, natural waters, such as snow, rain, or very fine spring water (Müller), free, especially, of any unusual proportion of carbonic acid; and to keep them in black, orange, or red bottles, instead of bottles of clear glass (Hanle). A better mode of procedure is to re-distil the water as soon as any change is perceived in it; this restores its original odor, and renders it less subject to alteration.

Although a minute description of the process of distillation cannot be given in a work of this kind, yet the mode of conducting it on a small scale will be better understood by reference to the accompanying figures from *Mohr*, *Redwood*, and *Procter's Pharmacy*.

Fig. 26.

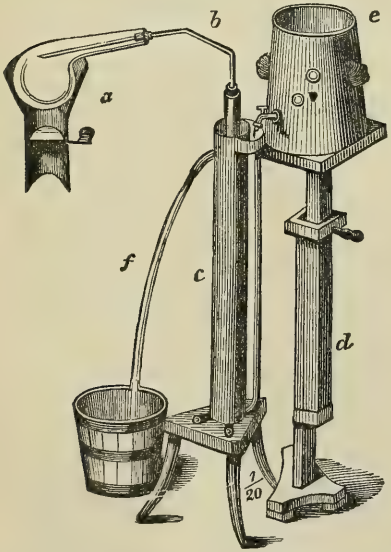


Pharmaceutical Still, seen in Section.

Fig. 26 represents a pharmaceutical still, holding about two gallons, made of tinned iron, and intended to fit in the top of a cylinder stove. A is the boiler; B the head, on the inner surface of which the condensation occurs; C the neck communicating with the recipient. *a a* is a rim, soldered around the mouth of the boiler, so as to form a water-joint; *c c* is a circular rim, soldered on the base of the head, in such a manner that the upper part forms a gutter for conducting the condensed fluid from the base of the condensing cone, *d d*, to the neck, C, whilst the lower part projects below into the double rim of the boiler, *a a*, to form the water-joint. *b* is an opening corresponding to the tubulure of a retort, which enables the operator to inspect the progress of the distillation, and to stir the contents of the still when necessary. This opening is stopped with a cork, or a tin cap. *e* is a funnel-tube into which a current of cold water runs during distillation, the warm water running off by the tube on the opposite side.

In using the apparatus, the water-joint should be two-thirds filled with water, the materials introduced, and the head adjusted and filled with water.

Fig. 27.



Distillation of Spirits.

Fig. 28.

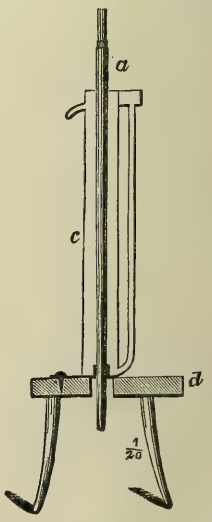
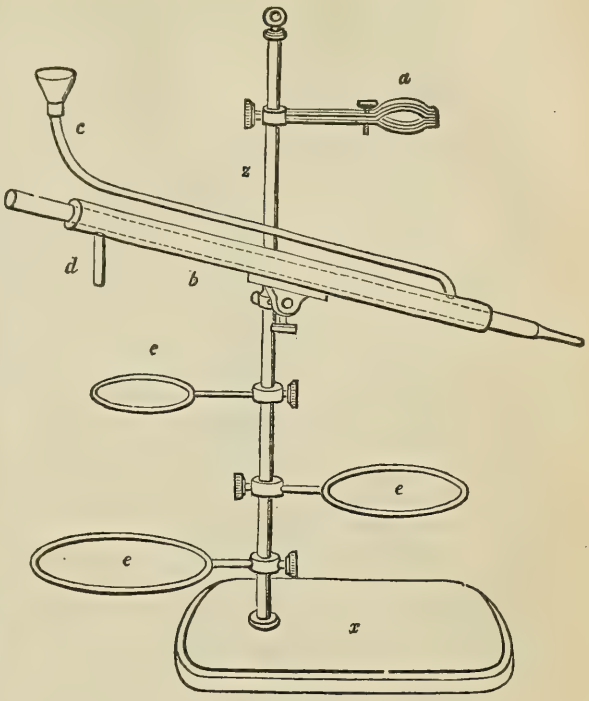


Fig. 27 represents Mohr's still, which is very convenient for limited operations. *a*, the retort; *b*, the connecting tube; *c*, the refrigerator, through which passes the condensing tube, represented at *a*, Fig. 28; *d*, the stand for supporting *e*, the tub of cold water; *f*, the refuse water.

Fig. 29.

Gas Furnace and Flask for Distillation.

Fig. 30.



Liebig's Condenser.

Figs. 29 and 30. A very simple and convenient arrangement is represented in these figures.

Fig. 29. *a*, funnel for introducing fresh liquid into the flask during distillation. *b*, the connecting tube.

Fig. 30. Liebig's condenser, consisting of the tube *b*, through which a glass tube is seen to pass. This connects by one end with the connecting tube of the flask, and from the other the distillate drops out.

By placing a vessel holding water, and provided with a stopcock, on one of the rings *e e e*. and by turning the cock, a continuous stream of water is carried through the tube *c* to the lower end of the condenser *b*, then upwards, surrounding the glass tube until it escapes by the pipe *d*. The retort-stand consists of the foot *x*, of the rod *z*, of the Gay-Lussac holder *a*, and of the rings *e e e*.

One of these three forms of apparatus will be found very convenient in conducting the distillatory processes of the shop.

By Admixture.—Another method of making medicated waters is by impregnating the water with the volatile oil, by triturating them together with the addition of carbonate of magnesium, and filtering to remove the latter. This affords an excellent product, as it is permanent. The addition of the carbonate of magnesium is merely to enable the operator to produce such a minute division of the oil as will enable water to act on it more efficiently. A small portion of magnesia is dissolved in the medicated water, but this does not interfere with its use, except when it is prescribed as a vehicle for poisonous alkaloids, in which case it should be slightly acidulated by the addition of a few drops of acetic acid. Other powders divide the volatile oil in the same way, and are preferred by some manufacturers.

Distilled, Essential, or Volatile Oils.—Volatile oils are contained in vegetable cells, generally peculiar, and often so large as to be distinct to the naked eye. Sometimes they exist in such abundance that the oil may be

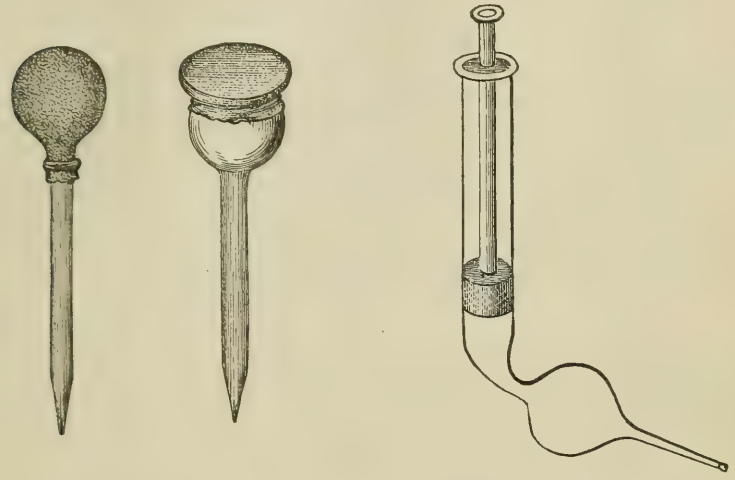
obtained by mere expression. The oils of lemon, orange, bergamot, and citron are prepared in this way by the manufacturer; and from many other substances, such as the unripe germen of rue, and the undeveloped corolla of the clove-tree, oils may be squeezed out by pressure with the nail. In some rare instances, as in that of the Liquid Borneo-Camphor from the *Dryobalanops Camphora*, and that of the Laurel-oil of Guiana, from a species of *Ocotea*, volatile oil is obtained largely, and of considerable purity, by exudation from incisions. Much more frequently, however, it is exuded spontaneously, or from incisions, as a turpentine in combination with resin, or as a gum-resin in union with both gum and resin. Most frequently of all, it cannot be obtained by any of these modes, but adheres with more or less force to the flowers, leaves, fruit, bark, or wood, which contain it. In that case it is sometimes destroyed or dispersed when the plant is dried, more especially if the organ which contains it is the flower; but often, when contained in the leaf, and very generally, if contained in the seed, bark, or wood, it is retained in part, or altogether, under desiccation, and even under long keeping. In some instances it appears that the volatile oil obtained from plants does not exist ready formed, but is produced on bruising or distilling them with water, through the reaction of other principles on one another. Of this mode of production two remarkable examples exist—the volatile oils of the bitter almond and black mustard seed—and the oils of cherry-laurel leaves, peach leaves, and of the leaves and seeds of other amygdalaceous plants, are similarly circumstanced.

A few volatile oils used in medicine are obtained by expression, such as the oils of orange, lemon, and bergamot, already mentioned. When oils exude along with resin in the form of turpentine, they may be separated from the resin by heat alone, as they are volatilizable at about the temperature of 400°. But thus obtained, they cannot be of fine quality, because the heat required is too near that at which resins, as well as the oils themselves, undergo decomposition. In general, therefore, this plan is not followed for pharmaceutic purposes; and volatile oils are obtained from turpentines by distilling them with water. For, although they do not enter into ebullition at the temperature of boiling water, their vapors pass over in large quantity with steam; and, condensing along with it, form distilled waters—with volatile oils either floating on the water, or, more rarely, sinking to the bottom. The volatile oils of many vegetable substances are to be separated in this way alone, because the other principles contained along with them in the crude substances are empyreumatized by the higher temperature which is required to disengage the oil without the co-operation of watery vapor. In some instances it has been thought advantageous to substitute for water in the still a strong solution of common salt, because a somewhat higher temperature is required to boil it. There seems an advantage in this change, for the rectification of oils previously obtained from the raw materials in which they reside; but the advantage in the case of distillation from crude vegetable substances is doubtful.

The method of distilling volatile oils differs little from that described above for preparing distilled waters. The same precautions must be observed in applying heat, and for the same reasons. The formation of mucilaginous matter at the expense of the oil, towards the close of the distillation, is shown by the globules of oil coming over enveloped in a fine pellicle of it. The quantity of water must be proportionally less, or rather, the same portion of water is to be used with successive portions of the material which yields the oil; otherwise, a material loss is sustained by solution of the oil in the water. In some instances, where the oil exists in low proportion, and is of great value, the distilled fluid should be left at rest for some time, and exposed to as low a temperature as can be commanded.

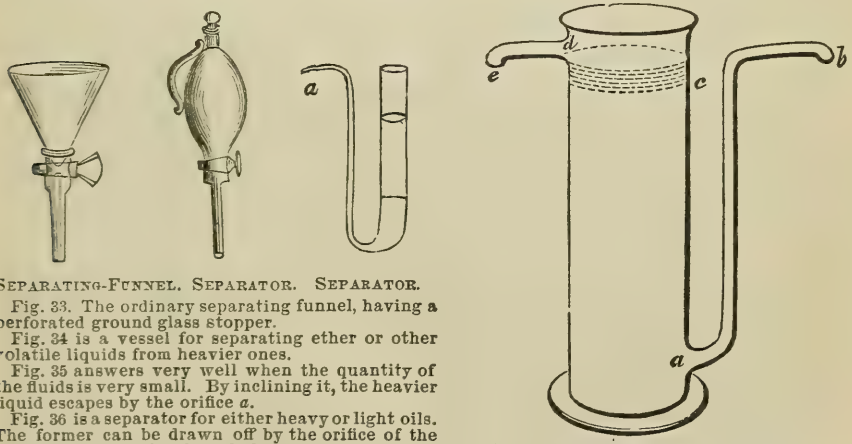
The mixed vapors which pass over condense into a milky-looking fluid, which, after standing some time in the receiver, separates into two portions, one a solution of a part of oil in water, and the other of the oil itself, which occupies the upper or lower part, according as it is lighter or heavier than the water.

Fig. 31. Fig. 32.



Figs. 31. and 32. VARIOUS FORMS OF PIPETTES FOR SEPARATING LIQUIDS, FILLING VIALS, ETC.

Fig. 33. Fig. 34. Fig. 35. Fig. 36.



SEPARATING-FUNNEL. SEPARATOR. SEPARATOR.

Fig. 33. The ordinary separating funnel, having a perforated ground glass stopper.

Fig. 34 is a vessel for separating ether or other volatile liquids from heavier ones.

Fig. 35 answers very well when the quantity of the fluids is very small. By inclining it, the heavier liquid escapes by the orifice *a*.

Fig. 36 is a separator for either heavy or light oils. The former can be drawn off by the orifice of the tube *b*; the latter by the tubule *d e*.

SEPARATOR FOR HEAVY OR LIGHT OILS.

Chevallier gives the following rules for the distillation of volatile oils:—

1. To operate upon large quantities, in order to obtain a greater product, and of better quality.
2. To conduct the distillation rapidly.
3. To divide the substances minutely, in order to facilitate the extrication of the oil.
4. To employ only sufficient water to prevent the plant from burning.

5. For substances whose oil is heavier than water, to saturate the water in the still with common salt, to raise the boiling point, and thus to enable the vapor to carry over more of the oil.

6. To employ, when possible, water which had already been distilled from off the same substances, and had thus become saturated with oil.

7. For oils naturally fluid, to cool the liquid in the refrigeratory frequently; but to retain it at 80° to 90° for those oils which easily become solid.

After the distillation, the oil should be separated from the water; for this purpose, several ingenious instruments have been devised, a few of which are represented in figures 31 to 36 inclusive.

The following table, from *Christison's Dispensatory*, showing the proportion of volatile oil obtained from the chief medicinal vegetable substances, will be found useful. The data are chiefly extracted or calculated from experiments by M. Raybaud in the *Journal de Pharmacie*, xx.—by Dr. Martius in *Repertorium für die Pharmacie*, xxxix.—by Dr. Bley in the same work, xlviii.—by M. Dann and by M. Voelter in the same work, lv.;—and a few have been added from experiments of Dr. Christison himself. The numbers represent the number of ounces obtained from 100 pounds avoirdupois. The letters before the figures refer to the authority for each.

	Author.	Ounces in 100 lbs. av.
Amygdalus communis.—Bitter almond	Ra.	0.38
Amygdalus communis.—Bitter almond	Vo.	7.70
Amygdalus communis.—Bitter almond	Duflos.	0.8 to 4.80
Angelica Archangelica—dried root	Ra.	4.50
Anthemis nobilis—fresh flowers raised at *Grasse*	Ra.	0.75
Anthemis nobilis—dried flowers raised at *Grasse*	Ra.	1.38
Anthemis nobilis—dried flowers, long kept, *Germany*	Bl.	4.50
Anthemis nobilis—flowers freshly dried	Steer.	5.33
Anthemis nobilis—flowers 12 months dried	Steer.	3.00
Apium graveolens—dried fruit	Ra.	9.00
Apium petroselinum—fresh herb, after flowering	Ra.	3.38
Apium petroselinum—dry fruit, *France*	Ra.	12.0
Apium petroselinum—dry fruit, *Germany*	Da.	30.0
Artemisia absinthium—fresh herb, *Paris*	Ra.	2.0
Artemisia absinthium—dried herb, recent, *Germany*	Ma.	16.0
Artemisia absinthium—dried herb, a year old, *Germany*	Bl.	8.75
Artemisia absinthium—dried herb, 3 years old, *Germany*	Ma.	5.0
Artemisia cina.—Wormseed of commerce	Ra.	3.0
Artemisia cina.—Levant wormseed	Vo.	10.8
Calamus aromaticus—fresh root, *Germany*	Ma.	16.0
Calamus aromaticus—recently dried, *Germany*	Bl.	17.5
Calamus aromaticus—long dried, *Germany*	Da.	14.3
Carum carui—dried fruit of French commerce	Ra.	50.12
Carum carui—dried fruit of German commerce	Ma.	66.5
Carum carui—dried fruit of German commerce	Da.	46.6
Carum carui—dried fruit of German commerce	Vo.	70.0
Caryophyllus aromaticus.—Cloves, *Bourbon*	Ra.	144.0
Caryophyllus aromaticus.—Cloves, *Cayenne*	Ra.	152.0
Caryophyllus aromaticus.—Cloves, *Cayenne*	Bl.	125.0
Caryophyllus aromaticus.—Cloves, *Molucca:* French commerce.	Ra.	148.0
Caryophyllus aromaticus.—Cloves, *Molucca:* English commerce.	Ra.	112.5
Caryophyllus aromaticus.—Cloves, average, German commerce.	Vo.	226.0
Caryophyllus aromaticus.—Cloves, finest, German commerce	Da.	250.0
Caryophyllus aromaticus.—Cloves, German commerce	Steer.	272.0
Cinnamomum zeylanicum—cinnamon of commerce	Ra.	1.56
Cinnamomum cassia—cassia bark of commerce	Ra.	12.0
Citrus aurantium—sweet orange flowers, 1 May, *Nice*	Ra.	5.0
Citrus vulgaris—bitter orange flowers, 7 May, *Nice*	Ra.	5.9
Citrus vulgaris—bitter orange flowers, 12 May, *Carmet*	Ra.	4.12
Citrus vulgaris—bitter orange flowers, 16 July, *Paris*	Ra.	0.9
Citrus vulgaris—bitter orange flowers, 14 Dec., *Paris*	Ra.	6.5
Citrus aurantium—rind of 100 oranges, by expression	Ra.	2.5

	Author.	Ounces in 100 lbs. av.
Citrus aurantium—rind of 100 oranges, by distillation	Ra.	2.75
Citrus vulgaris—rind of 100 oranges, by expression	Ra.	4.0
Citrus vulgaris—rind of 100 oranges, by distillation	Ra.	4.25
Citrus limetta—rind of 100 limes, by distillation	Ra.	2.12
Citrus bergamium—rind of 100 bergamots, by distillation	Ra.	2.9
Citrus limonum—rind of 100 lemons, by expression	Ra.	1.9
Citrus limonum—rind of 100 lemons, by distillation	Ra.	1.4
Cochlearia armoracia—fresh seeds	Ra.	0.9
Coriandrum sativum—dry fruit of French commerce	Ra.	2.3
Coriandrum sativum—dry fruit of German commerce	Da.	9.0
Croton Eleutheria—cascarilla bark	Bl.	5.62
Cuminum cyminum—dry fruit of French commerce	Ra.	44.0
Cuminum cyminum—dry fruit of German commerce	Bl.	32.5
Daucus carota—dry fruit	Ra.	0.66
Daucus carota—fresh root	Ra.	0.14
Dracocephalum moldavicum—flowering herb	Ra.	2.10
Drimys Winteri—Winter's bark (probably, Cinnamodendron corticosum)	Ra.	0.50
Eugenia pimenta—pimenta berries, *Jamaica*	Ra.	12.38
Fœniculum officinale—dry fruit of French commerce	Ra.	33.0
Fœniculum officinale—dry fruit of German commerce	Ma.	56.6
Fœniculum officinale—dry fruit of German commerce	Bl.	83.0
Fœniculum officinale—dry fruit of German commerce	Da.	60.4
Fœniculum officinale—flowering herb, *Grasse*	Ra.	4.9
Fœniculum officinale—herb after flowering, *Grasse*	Ra.	6.0
Galipea officinalis—Cusparia-bark of commerce	Ra.	1.5
Genista canariensis—Rhodium wood	Ra.	0.47
Geum urbanum—dry roots	Ra.	0.53
Hyssopus officinalis—flowering herb, *Grasse*	Ra.	5.30
Illicium anisatum—star-anise fruit	Ra.	34.21
Illicium anisatum—star-anise fruit	Da.	25.5
Juniperus communis—green berries, 15 Sept.	Ra.	3.9
Juniperus communis—ripe berries, 1 Dec., *France*	Ra.	7.75
Juniperus communis—ripe berries, fresh, *Germany*	Do.	15.5
Juniperus communis—ripe berries, a year old, *Germany*	Ma.	10.8
Juniperus communis—ripe berries, a year old, *Germany*	Bl.	16.25
Juniperus sabina—fresh twigs, 5 March, *Grasse*	Ra.	19.05
Juniperus sabina—fresh twigs, 2 Oct., *Paris*	Ra.	14.25
Juniperus sabina—dried twigs, recent, *Germany*	Ma.	40.0
Juniperus sabina—dried twigs, a year old, *Germany*	Ma.	25.0
Larix cedrus—fresh cedar wood, *Paris*	Ra.	0.3
Larix cedrus—cedar wood of commerce	Ra.	4.25
Laurus nobilis—fresh leaves, 26 Jan., *Paris*	Ra.	5.25
Laurus nobilis—leaves some years dried, *Germany*	Bl.	4.10
Laurus nobilis, fresh leaves, early in Oct. near *Edinb.*, poor soil, low site	Chr.	7.33
Laurus nobilis, fresh leaves, early in Oct. near *Edinb.*, poor soil, high site	Chr.	6.9
Laurus nobilis, fresh leaves, early in Oct. near *Edinb.*, very fine soil, low site	Chr.	17.12
Lavandula vera—flowering herb, 2 Aug., *Grasse*	Ra.	11.5
Lavandula vera—flowering herb, 2 Aug., *Grasse*, north exposure	Ra.	9.12
Lavandula vera—flowering herb, 26 July, *Soureillas*	Ra.	9.0
Lavandula vera—herb after flowering, 26 Sept., *Soureillas*	Ra.	15.0
Lavandula spica—fresh herb, 24 July, *Paris*	Ra.	7.62
Lavandula spica—fresh herb, 4 Aug., *Grasse*	Ra.	12.5
Lavandula stœchas—dry spikes	Ra.	6.43
Ligusticum levisticum—fresh herb, *Paris*	Ra.	1.12
Melissa officinalis—fresh flowering herb	Ra.	0.25
Mentha piperita—fresh tops in flower, *Grasse*	Ra.	6.25
Mentha piperita—fresh tops in flower, *Paris*	Ra.	3.40
Mentha piperita—dried tops in flower, *Germany*	Bl.	15.62
Mentha piperita—dried tops in flower, *Germany*	Ma.	21.0
Mentha pulegium—fresh flowering herb	Ra.	1.0
Myristica moschata—mace of commerce, finest	Vo.	154.0
Myristica moschata—mace of commerce, fine	Bl.	125.0
Myristica moschata—mace of commerce, worm-eaten	Bl.	65.6
Myristica moschata—nutmegs of commerce, fine	Bl.	108.25

	Author.		Ounces in 100 lbs. av.
Myristica moschata—nutmegs of commerce, worm-eaten	Bl.	....	64.1
Myrtus communis—fresh leaves, September 20, *Grasse*	Ra.	....	4.5
Myrtus communis—fresh leaves, September 6, *Paris*	Ra.	....	2.5
Origanum majorana—fresh flowering herb, August 3, *Grasse*	Ra.	....	8.5
Origanum majorana—fresh flowering herb, August 3, *Paris*	Ra.	....	4.4
Origanum vulgare—fresh flowering herb, September 15, *Paris*	Ra.	....	0.4
Pimpinella anisum—dry fruit of French commerce	Ra.	....	35.12
Pimpinella anisum—dry fruit, new, German commerce	Ma.	....	37.5
Pimpinella anisum—dry fruit, old, German commerce	Ma.	....	27.0
Pimpinella anisum—dry fruit of German commerce	Vo.	....	25.0
Pimpinella anisum—dry fruit of German commerce	Da.	....	43.75
Piper cubeba—cubebs of French commerce	Ra.	....	19.5
Piper nigrum—white pepper of French commerce	Ra.	....	16.0
Piper nigrum—black pepper of French commerce	Ra.	....	18.12
Prunus lauro-cerasus—fresh leaves, November 23, *Paris*	Ra.	....	2.13
Prunus lauro-cerasus, fresh leaves from the same plants: near *Edinburgh*. undeveloped, June 7	Chr.	....	10.13
Prunus lauro-cerasus, fresh leaves from the same plants: near *Edinburgh*. half-grown, June 7	Chr.	....	7.20
Prunus lauro-cerasus, fresh leaves from the same plants: near *Edinburgh*. full-grown, 8 weeks on tree, July 15	Chr.	....	4.96
Prunus lauro-cerasus, fresh leaves from the same plants: near *Edinburgh*. 12 mos. on tree, June 2.	Chr.	....	1.04
Prunus lauro-cerasus, fresh leaves of the same plant, 1 Sept. 1836, *Edin.* 3 mos. on the tree.	Chr.	....	7.04
Prunus lauro-cerasus, fresh leaves of the same plant, 1 Sept. 1836, *Edin.* 15 mos. on the tree.	Chr.	....	2.24
Renealmia cardamomum—lesser cardamoms	Ra.	....	11.42
Rosa centifolia—fresh flowers, *Grasse*	Ra.	....	0.25
Rosmarinus officinalis—fresh flowering herb, *Grasse*	Ra.	....	5.0
Rosmarinus officinalis—fresh flowering herb, *Paris*	Ra.	....	3.5
Ruta graveolens—fresh flowering herb, 20 July, *Grasse*	Ra.	....	4.12
Ruta graveolens—fresh flowering herb, 28 July, *Paris*	Ra.	....	0.63
Ruta graveolens—flowering herbs, newly dried, *Germany*	Bl.	....	4.4
Ruta graveolens—dried seeds, *South of France*	Ra.	....	19.0
Salvia officinalis, v. *minor*—fresh herb, 12 Mar., *Grasse*	Ra.	....	6.0
Salvia officinalis, v. *minor*—fresh herb, 14 June, *Paris*	Ra.	....	2.5
Salvia officinalis, v. *major*—fresh herb, 12 Mar., *Grasse*	Ra.	....	4.0
Salvia officinalis, v. *major*—fresh herb, 14 June, *Paris*	Ra.	....	3.05
Santalum album—sandal-wood of commerce	Ra.	....	5.0
Sinapis nigra—black mustard-seed, *Germany*, 12 months old	Da.	....	3.9
Sinapis nigra—black mustard-seed, *Germany*, fresh	Da.	....	5.0
Sinapis nigra—black mustard-seed, *France*, fresh	Da.	....	7.75
Sinapis nigra—black mustard-seed, *France*	Vo.	....	9.1
Tanacetum vulgare—fresh flowering herb, 9 July, *Grasse*	Ra.	....	1.2
Tanacetum vulgare—fresh flowering herb, 25 July, *Paris*	Ra.	....	5.8
Tanacetum vulgare—fresh tops, *Germany*	Da.	....	5.0
Tanacetum vulgare—dried flowering herb, *Germany*	Bl.	....	15.6
Thuya occidentalis, fresh twigs near *Edin.* aged, stunted tree; exposed. Oct. 21	Chr.	....	10.8
Thuya occidentalis, fresh twigs near *Edin.* aged, vigorous: sheltered. Oct. 21	Chr.	....	10.25
Thuya occidentalis, fresh twigs near *Edin.* young, vigorous; exposed. Oct. 9.	Chr.	....	18.25
Thuya occidentalis, fresh twigs near *Edin.* young, vigorous: exposed; fine soil, Sept. 26	Chr.	....	26.40
Thymus serpyllum—fresh flowering herb, 6 Aug. *Grasse*	Ra.	....	5.0
Thymus serpyllum—fresh flowering herb, 5 July, *Paris*	Ra.	....	0.9
Thymus vulgaris—fresh flowering herb, 16 August, *Grasse*	Ra.	....	6.5
Thymus vulgaris—fresh flowering herb, 13 July, *Paris*	Ra.	....	3.75
Valeriana officinalis—dry root, a year old, *Germany*	Bl.	....	30.16
Valeriana officinalis—the root, *Germany*	Da.	....	15.0
Valeriana officinalis—the root, *Germany*	Vo.	....	10.5
Verbena odorata—fresh flowering herb, *Paris*	Ra.	....	3.1
Zingiber officinale—dry root of commerce	Ra.	....	10.8

Volatile oils should be preserved in dark bottles, carefully closed and nearly full. When kept for any time, they are apt to undergo certain changes, becoming dark-colored, losing their agreeable odor, and growing thick and clammy. It is then necessary to re-distil them with a certain quantity of water, by which the undecomposed portion is again obtained in a pure state.

Another mode is to agitate with recently heated animal charcoal; this restores their clearness, and in a great measure their fragrance. On mixing colored volatile oils with some fixed oil and rectifying them by distillation with water, nearly all may be obtained colorless.

FIXED OILS AND FATS.—Fixed oils are obtained from the fruit or seeds of vegetables, by expression; by boiling the bruised seeds in water, and removing the oil that rises to the surface; and by dissolving out the oil by means of a menstruum.

By Expression.—This is accomplished in several ways: By means of the wedge press, or by a screw or hydraulic press, the former being the more generally employed. In almost all cases, it becomes requisite to heat the seeds gently, to render the oil more liquid; but care must be taken that the heat is not too great; otherwise, the oil will become of a dark color, and acquire an unpleasant taste. It is by this method that linseed and castor oils are obtained. The oil, as it comes from the press, is seldom pure or fit for use; it is freed from these impurities by boiling with water, and separating the pure oil. These oils are often colored, owing, in most cases, to heating the seeds too much; this is peculiarly the case with linseed oil, which is seldom seen of a light color.

By Decoction.—This is effected by boiling the bruised seeds in water, and skimming off the oil as it rises to the surface. This plan is also employed in making cod-liver oil, as well as in the manufacture of castor oil in the West Indies.

By Solution.—This affords a very pure oil, but is seldom employed on account of expense. It is, however, useful in facilitating the extraction of some of the thick and viscid oils. Thus, croton oil is more readily obtained by mixing the ground seeds with half their weight of alcohol, and, after letting the mixture stand for some time, submitting it to pressure, and distilling off the spirit from the product. Bisulphide of carbon, and petroleum benzin have, of late, been much employed for the extraction of fixed oils.

Solution in ether is also useful in some cases, when expense is not an object, oil of ergot is best obtained in this manner.

The solid oils, as oil of cacao, etc., require the aid of heat in their expression, and the ground material containing them is therefore placed between heated plates in the press.

Animal Fats.—Formerly, the fats of many animals were employed in pharmacy; but, at present, those principally used are lard, suet, and beef's marrow. To render these fit for pharmaceutic purposes, the crude material is to be cut into small pieces, freed as much as possible from all extraneous substances, and placed in a boiler with water, and heated until it is fused, when the fluid fat is strained, slowly cooled, and carefully separated from the water. These fats are best preserved by being run into glazed jars, and kept from the action of the air.

ALKALOIDS.—The vegetable alkaloids may be obtained by a variety of processes, but these invariably comprehend decomposition of the alkaloidal salt in the crude drug, either by the superior affinity of an alkali, earth, or alkaline carbonate, or by double decomposition with some compound salt whose base forms an insoluble salt with the acid in the drug. Active neutral principles, and a few alkaloids—such as narcotina from opium, piperina from white pepper, picrotoxin from cocculus indicus, and elaterin from elaterium—may be obtained through the agency of such simple solvents as water, rectified spirit, and sulphuric ether, used singly or successively.

The solutions from which vegetable alkaloids are prepared are, in general,

obtained best by the method of percolation. Some experience is required to apply this process in all cases with success. But, when well performed, it is greatly superior, in general, to any other mode of extracting the active matters of vegetable drugs, in cases in which the liquid used is spirituous or ethereal; and it is often not less advantageous in the instance of water, as well as acidulous fluids. The precautions for applying it successfully have been considered under the head of tinctures.

Spirits are alcoholic solutions of volatile principles obtained by distillation.

When spirit is distilled with aromatic vegetables which contain volatile oil, the oil, for the most part, rises with the spirituous vapor, and condenses along with it in a state of solution. In some cases, the volatile oil rises with the vapor of strong spirit, so that alcohol may be employed for the purpose; and this is occasionally necessary for keeping the oil of the distilled spirit in solution. In other instances, the oil does not begin to pass over until watery vapor also passes in considerable proportion with the spirituous vapor; so that diluted alcohol is required for the process.

For most medicinal purposes, but especially the present, the menstruum should be made by diluting alcohol with water.

The best apparatus for preparing distilled spirits is that represented at page 658, fig. 27. It has been proposed to prepare them by distillation in a vacuum-still; but many volatile oils will not rise with spirit-vapor at the low temperature at which spirit boils in a vacuum.

These preparations, like distilled waters, may be obtained either from crude vegetable substances, or from their volatile oils. They are seldom, however, of such fine aroma when prepared in the latter as in the former way, unless care be taken to employ those volatile oils only which have been recently as well as carefully distilled.

Essences differ from spirits in being volatile substances dissolved in alcohol; but this name is generally applied to strong alcoholic solutions of the volatile oils. Many of the officinal spirits are now made simply by dissolving the volatile oil in alcohol.

Troches, or Lozenges, are small, dry, solid masses, consisting of powders incorporated with sugar and mucilage. Some writers include under this name *drops* and *pastes*, making the following distinction between them:—

Lozenges, when the principal basis is sugar, and when the ingredients are combined without the aid of heat.

Drops, when the principal basis is sugar, but when the ingredients are combined with the aid of heat.

Pastes, when the principal basis is a vegetable juice or pulp, and when the mixture is of a soft consistence.

Lozenges are much more employed in Europe than in this country as a mode of administering medicines. In making them, the sugar is employed in a powdered state; the more active ingredients added in powder, or in a liquid state; and the whole mixed into a paste by the addition of mucilage. The mucilage generally used is that of tragacanth, as being more tenacious than that of gum Arabic. After the ingredients are properly incorporated, the paste is rolled out into a uniform sheet on a marble slab, previously sprinkled with some powdered starch to prevent adhesion, and cut into small cakes by means of a punch. These cakes are then to be placed on sieves, and kept in a drying-room until they have become perfectly dry and hard, when they are to be sifted, and kept in well-closed bottles.

Drops are formed from coarsely-powdered sugar, to which the flavoring or medicinal ingredients are added in a liquid state, so as to moisten the sugar.

The mixture is then melted in a proper vessel, over a clear fire, after which the melted mass should be allowed to drop in small portions on a marble slab or greased metallic plate, and when cold, be removed, and kept like lozenges.

Pastes are usually formed of inspissated vegetable juices, or decoctions, with the addition of sugar, gum, etc. These are to be brought to a proper consistence, and the mixture poured into flat, shallow moulds, or rolled out, as in the case of lozenges, and divided into pieces of the desired size.

INHALATIONS.—These have, at different times, been much in vogue as a means of combating disease, especially complaints of the respiratory organs. Within the last few years, much interest has been excited relative to this mode of administering medicinal agents, from the remarkable anæsthetic effects caused by the inhalation of the vapor of ether and chloroform. The simplest form of using either of these is by pouring the requisite quantity on a hollow sponge, and applying this over the mouth of the patient. Various forms of inhaling apparatus have been invented, which will be found described in *Mohr and Redwood's Pharmacy*, 535–9, with directions for their use.

EXTERNAL REMEDIES.

BATHS.—By the term bath is meant the complete or partial immersion of the body in a fluid or gaseous medium, differing, in some circumstances, from that to which it has been accustomed. In order to obtain the full efficacy of a bath, without injurious consequences, its temperature should be regulated, and particularly prescribed by the physician ordering it. The following temperatures are those given by Dr. Forbes in the *Cyclopædia of Practical Medicine:*—

Cold Bath	between 33° and 60° F.
Cool Bath	" 64° and 75° F.
Temperate Bath	" 75° and 85° F.
Tepid Bath	" 85° and 92° F.
Warm Bath	" 92° and 98° F.
Hot Bath	" 98° and 112° F.

The effects of these different baths on the system are very dissimilar, according to their temperature, and the time during which the patient is subjected to their influence.

COLD BATH.—When a person plunges into a cold bath, he is first sensible of a sudden sensation of cold upon the surface, accompanied by an oppression of breathing, causing this function to be performed in convulsive gasps. This is called the *shock*, and is caused by a rapid contraction of the cutaneous capillaries, and a retrocession of the blood to the lungs and other internal organs. In a short time, the difficulty of breathing disappears, the temperature becomes agreeable, and if the person now leaves the water, a warmth of the surface comes on, termed the *glow*, succeeded by a sense of invigoration of the whole system. Should the person remain in the water for too long a time, another train of symptoms manifest themselves; the sensation of cold soon attains to an unpleasant degree of chilliness, followed by rigors; a bluish tint is perceptible on the surface of the body; the blood accumulates in the internal organs; and, on leaving the water, there is no reaction, or a very feeble one, the surface remaining cold, the extremities benumbed; and headache, difficult respiration, often pain in the chest, ensue, with a sense of depression and lassitude. The use of proper means will often remove these symptoms; but they may lead to a variety of diseases of the internal organs.

The objects in prescribing a cold bath are the production of a sudden and powerful impression on the nervous system, and the tonic influence it exercises when followed by due reaction. In the first of these, it has been found useful in certain affections where there is a derangement of the functions of sensation, of motion or sensation unattended with a congestive or inflammatory condition of the internal organs; but it is more frequently ordered to fulfil the second indication.

It is always contra-indicated when, from debility, the system does not react so as to produce a glow; when there is a tendency to congestion of the cerebral vessels, or any serious organic affection of the heart, lungs, or kidneys. In all cases, it is advantageous, before taking the cold bath, to take such exercise as will raise the circulation, without occasioning fatigue or perspiration, for reaction is almost certain to follow the immersion, except when the person has remained in the water too long a time. The period of immersion should not exceed five minutes.

Cool Bath.—The action and uses of this are similar to the last, but are less powerful. It is, therefore, better calculated for those who are much debilitated.

Temperate Bath.—As the temperate bath is of a temperature closely approaching that of the body, the shock and subsequent reaction are almost wanting. It is, therefore, much more employed for purposes of comfort and cleanliness than as a remedial agent. In delicate persons, it should always be used instead of the cold or cool bath, and is always better suited to very young children than lower temperatures.

Tepid Bath.—This is intermediate in operation between the temperate and the warm bath, and varies in effects and uses according to the temperature. In perfect health, it should not be used as an habitual indulgence; but, for the purposes of cleanliness, an occasional recurrence to it allows of a more perfect ablution than can be effected by cooler baths. It is better to use it about noon, when the first process of digestion of the morning meal is over, and immediately afterwards to take brisk exercise in the open air. In cases of fatigue and febrile irritation, from over-exertion or a long journey, the tepid bath is generally found very beneficial. It is also serviceable to persons of sedentary habits, etc. In all such cases, however, it is not to be employed immediately after a meal, or when the individual is unduly excited, either mentally or corporeally. In one class of complaints, those dependent on gastric irritation, the tepid or even the warm bath proves of much service.

Warm Bath.—The first effect of a warm bath is to produce a sensation of heat upon the surface, and to increase the pulse in quickness and fulness, though in most cases to diminish its tenseness. The cutaneous circulation more especially becomes affected, and the body is increased in bulk, as shown by the increased pressure of ligatures, or of rings upon the fingers. The secondary effects, when the immersion is continued for some time, are muscular relaxation, sometimes to a considerable degree; even after leaving the bath, a disposition to lassitude continues for some time, with a tendency to perspiration.

The remedial effects of a warm bath depend on its temperature, the time a patient remains in it, and the subsequent treatment. The medium time for remaining in the bath is from twenty to twenty-five minutes; but this must be regulated by the effect produced. It is beneficial in incipient catarrh, in some congestions of the internal organs, chronic rheumatism, and in spas-

modic affections, especially those of children; but is contra-indicated in active fever, or when there is congestion, or a determination of blood to the head.

In the convulsions of children, its effects are remarkably beneficial, as it not only relaxes spasm, and relieves for the moment, but soothes nervous irritation. In cases where the convulsions are severe, it will be found advantageous to apply cold water to the head. When a warm bath is administered to a child, care must be taken not to expose it to the cold air for the purpose of drying its body; the best plan is to envelop it in a warm blanket, and to place it in bed at once. By this plan, it is not liable to take cold, which is a common objection to the use of the warm bath for children.

Hot Bath.—From its temperature being above that of the body, the hot bath is far more stimulating than the preceding, as evinced by the excitement of the pulse, the sensations of fulness in the head and throbbing of the cerebral vessels. Its use is principally confined to cases where it is wished to arouse nervous energy and vital action, as in Asiatic cholera, etc.; or where there is a sudden retrocession of cutaneous diseases. It has also proved useful in certain forms of rheumatism and paralysis. As the intention is mainly to induce excitement, the patient is not to be exposed to its action long enough to cause exhaustion.

Whatever description of bath is ordered to be used, the original temperature is to be maintained during the whole time the patient remains in the water. At the end of some minutes, therefore, the heat should be tested by a thermometer, and, if requisite, hot water added. The sensations of the bather are always a fallacious criterion.

Shower Bath.—This is a modification of the cold affusion, being attended with the same effects, but in a less degree. The short duration of it renders it less refrigerant than the cold bath, and causes the primary shock to be the most important part of the influence it exercises, which may be modified by increasing or diminishing the temperature of the water, or that of the height from which the fluid falls. It is used either cold or tepid. The former is most advantageous when the powers of the system are sufficient to cause a reaction, that results in a glow on the surface, soon after using the bath; but, where this is not the case, as in debilitated individuals, the temperature is to be increased. It is adapted to those cases where a powerful impression is wished to be made upon the nervous system, as in chorea, hysteria, etc., and is also of much benefit to persons subject to determination to the head. In such cases, it is found advantageous to make the patient stand in hot water at the time of taking the bath. The reaction following its use is much promoted by using friction to the surface. The improved and portable shower baths, now to be procured, obviate many of the objections to its use which formerly existed. For children, the best and most convenient apparatus that can be employed is one described by Dr. A. T. Thomson. (*Domestic Management of the Sick Room.*)

"It consists of a hollow vessel made of tin, with a perforated bottom. The body of the vessel is of a bell-shape, with a hollow tube rising from the top, and terminating in a broad perforated rim. When the bath is to be used, it must be sunk in a bucket of water, until it is completely submerged; the air is thus driven out of the bath, through the tube, and the bath filled with water. The thumb of an attendant is then to be placed on the opening in the centre of the rim, and the bath raised from the bucket of water. The pressure of air upon the holes in the bottom retains the water in the bath; and, on raising the thumb from the upper orifice, the whole is rapidly discharged. In using it, the child must be placed in an empty tub, and the bath, being held over his head, is then to be discharged; and the child imme-

diately afterwards dried, with friction. When salt water is used for this bath, the hair should be kept dry by means of an oil-skin cap."

Local Baths.—These are most frequently used warm. The most common are the *hip-bath* and *foot-bath*. They are principally employed as revulsives. The first has been found a valuable remedy in diseases of the womb, and in irritations of the pelvic organs. Where it is employed merely to soothe pain, the temperature should not exceed 80° to 90°, and the patient is to remain in it for some time; but when it is intended to excite the uterus to greater action, it should be as hot as can be borne by the patient, though the continuance in it should not exceed ten to fifteen minutes. The hot foot-bath should be of as high a temperature as can be borne, so as to redden the skin of the immersed parts effectually. The vessel used should be sufficiently deep to allow the legs to be immersed nearly to the knees. It is a valuable remedy in the early stages of catarrh, and local congestions of the head, chest, or abdomen; and in the dyspnœa accompanying hypertrophy of the heart, it has often proved very beneficial. It may be rendered more stimulating by the addition of common salt, carbonate of potassium, or flour of mustard. In torpid states of the liver, a mixture of nitric and muriatic acids, in the proportion of about an ounce of each to every gallon of water, often proves highly useful.

Vapor Bath.—This consists in either wholly enveloping the patient in the steam of hot water, or merely his body, or some of its parts. A much more elevated temperature can thus be borne than where the body is immersed in water, and its action is more confined to the skin; hence, although less stimulating, it is more diaphoretic than the hot bath. Where the vapor is inhaled, the heated surface being extended, it is more powerful in its effects. It has proved of great benefit where an active revulsion to the surface is indicated, and also in the treatment of cutaneous diseases. It can be applied with little trouble. All that is required is that the patient be seated on a chair with a vessel of hot water placed beside him, and the whole enveloped with a blanket, to be thrown over his head if the vapor is to be breathed, or pinned around his neck where this is not the case. The steam soon surrounds his body, and causes a copious perspiration; and, should it cease too soon to be evolved, its generation may be restored by dropping a heated brick or stone into the water. Where the vapor is not respired, it may be used of a higher temperature.

The Warm Air Bath is more stimulating than the vapor bath, producing —especially where the warm air is also breathed—general uneasiness, heat of skin, excitement of the pulse, until a general perspiration ensues. It is readily administered even to persons in bed. The bedclothes should be elevated by a light frame, and the heated air be admitted by means of a tube. It has been found beneficial in chronic rheumatism, and was at one time much praised in the collapsed stage of cholera.

Douches consist in the forcible application of a stream of hot or cold water to a part of the body, in such a manner that the force of the stream of the fluid shall aid the stimulant effect. The hot douche may be formed by pouring from a height hot water from a tea-kettle, or through a tube about an inch and a half in diameter, so as to cause the fluid to strike forcibly upon the affected part of the body, whilst at the same time percussion is employed; or, in other words, the part is beaten by means of a caoutchouc bottle, stuffed with wool, and affixed to a cane handle.

A temperature of 160° is readily borne in douching. When the disease

is chronic rheumatism, or when deep-seated pains are to be removed, the douching should be continued for either half or three-quarters of an hour at a time; and the patient should be afterwards placed in bed between blankets, in order to encourage sweating. The most decisive advantage, in enlarged, stiff, and painful joints, results from this mode of douching.

In cases of complicated fevers, and in some other diseases, in which inflammation of the brain occurs, the *cold douche* is frequently ordered. The mode of applying it consists in pouring a stream of cold water on the shaved head. The patient should be raised in bed, and the head held over a basin, or other vessel, whilst a stream of cold water is directed on the crown, and the fall of the water gradually increased. After this, the head should be merely dried, but not rubbed. It not only soothes the patient, but often induces sleep, although it usually causes a most uncomfortable feeling at first; but relief is so quickly experienced, that its repetition is generally requested by the invalid.

A *vapor douche* is very stimulating, and when of a high temperature, and continued for any time, will cause vesication. It may be used as a counter-irritant instead of moxa.

Medicated Baths are such as contain medicinal agents in solution in the water, and are used both topically and generally. Saline, acid, and alkaline substances, with iodine and sulphur, are the materials most commonly employed. Medicated baths are sometimes natural, as those of sea water and certain mineral springs; others consist of solutions of various articles, artificially prepared. Of the medicated baths, sea water is the most generally used, more, however, for pleasure than for remedial purposes. It is not only stimulating, on account of its saline constituents, and its use followed by a perfect glow, but these constituents also exert a medicinal action on the system in certain diseases of debility. The nitro-muriatic acid bath has been found useful in diseases of the liver; and alkaline, ioduretted, and alkaline sulphuretted baths are advantageously employed in many forms of cutaneous disease.

Medicated *vapor* baths are prepared by impregnating aqueous vapor with the volatile principles of medicinal plants, though it is very doubtful whether they produce any effects that cannot be obtained from the simple vapor bath. But the fumes of sulphur, chlorine, camphor, mercury, etc., in combination with aqueous vapor have been found to exert powerful effects on the system, and to be very effectual in the cure of certain diseases.

Affusion.—This consists in pouring or dashing a quantity of water on the body, or a portion of the body, from an inconsiderable height, most generally for the purpose of reducing its temperature; but it is also employed as a revulsive agent, and to give an impulse to the nervous system. Affusions are made with cold or tepid water. Cold affusion is one of the most powerful general means of abstracting caloric from the body, we possess; it not only lessens the temperature of the surface, but it diminishes the action of the heart. It has been successfully employed in the treatment of fevers, but its use requires much judgment as respects the time of its application, which, according to Currie and others, is "when there is no sense of chilliness present, when the heat of the skin is steadily above what is natural, and when there is no general or profuse perspiration." It should not be employed either in the cold or sweating stage of fever, or in the hot stage where the heat does not much exceed the natural standard. From inattention to these circumstances, and from patients being injured by its effects, affusion is not at present often resorted to in the treatment of fevers. In scarlatina and some other of the exanthemata, it has been employed with

benefit, to reduce the morbid heat of skin. It is, however, more relied upon in inflammatory diseases of the brain; in these cases, the water is to be poured upon the head, inclined over a basin or tub, by means of a pitcher. In children, it is sufficient to squeeze a large sponge, previously saturated with cold water, at some height above the head. Where a general affusion is deemed necessary, the patient should be taken out of bed, his head having been previously shaved; and, being stripped naked and placed on a stool in an empty tub, from *three* to *five* gallons of water, at a temperature not under 40° Fahr., should be thrown over him. This affusion should be repeated until he feels cold, or rather until a rigor or shivering, or even chattering of the teeth, is experienced. He should then be dried, placed in bed, and a little warm wine and water administered to him, to aid the reaction and the consequent perspiration.

But in cases where the invalid faints on raising him into the erect position; where he feels chilly, although the thermometer indicates a high febrile temperature; where the skin is bedewed with perspiration; where the patient is a woman, and the monthly change is present; or where the operation is dreaded, it ought not to be employed. The evening is the best time for using the cold affusion.

Cool affusion is sometimes used instead of the cold, and is preferable for weak, irritable individuals. Tepid affusion is also beneficial in certain cases; especially where there is a fear that perfect reaction will not take place after the application of cold water; or where disease of the pulmonary organs exists. It has been found very efficacious in scarlatina, as also in hectic fever. Warm affusion has likewise been used; but its effects are far more temporary than those of the warm bath.

Sponging.—The object of sponging the body, either with cold or with tepid water, is to reduce the heat of the surface by means of evaporation, with the view of softening the pulse and diminishing its frequency; of rendering the skin perspirable; of relieving headache, checking delirium, and promoting sleep. In order to perform it well, the patient should be taken out of bed; and, being undressed and placed in a chair, two or three persons should, at the same time, pass large sponges, wet with simple cold or tepid water, or vinegar and water, rapidly over different portions of the naked body, until the whole of it shall have been successively sponged, and a chill has come over the patient, who is then to be dried and placed in bed.

This appears to be a simple process; but it requires both caution and judgment to determine on its use, and to render it not only salutary but free from danger. For example, if, notwithstanding the continuance of great heat and dryness of the skin, a sensation of chilliness comes over the patient when the sponging is about to be done, the operation should be delayed; neither should it be done if the smallest tendency to perspiration, indicated by moisture in the axillæ, or on the palms of the hands, displays itself. But, if it has been done, and if partial relief has been obtained, if the heat of the skin returns, and the pulse rises, it may again be resorted to and repeated.

But, besides the advantages to be obtained from *sponging*, during the presence of disease, it is also productive of great benefit in warding off diseases, or in a prophylactic point of view. The sponging, however, under such circumstances, is to be performed in a different manner from that which has been described.

In those predisposed to asthma and to bronchitis, known in ordinary language by the term *cold* or *cough*, and in those, also, who are predisposed to *croup*, nothing is so serviceable in warding off the paroxysm of the former disease, or in preventing the attack of the latter malady, as cold and tepid

sponging of the chest and the trunk of the body. It is also equally serviceable during dentition in infants, and as a general tonic in delicate conditions of the system. In these cases it should be followed by gentle friction over the surface of the body.

Sponging the body, as a prophylactic, or as a tonic, is always most efficacious when it is performed whilst the patient is still in bed. Let him sit up; or, if unable to do so, let him be raised into the sitting position, keeping the lower limbs under the bedclothes. The night-shirt or night-dress is then to be stripped down, and a large towel or sheet put round the waist to prevent the bedclothes from being wetted. The naked trunk of the body and the upper part of the arms are then to be moistened with a sponge, or a piece of flannel, dipped either in cold or tepid water, or vinegar and water, or salt water, as the case may demand; after which, in drying the skin, if water only has been used, brisk friction should be employed, so as to cause a general glow upon the surface. In some cases, salt and water, or vinegar and water are preferable to the simple water. The best proportions are two ounces of *salt*, or the same quantity of common *vinegar*, to a pint of water. When these adjuncts are used, friction is not required; indeed, when salt water is employed, the skin should be dried with a soft, old towel, fitted to soak up the water only, and to leave the saline particles upon the surface.

The best time for using such spongings is just before getting out of bed in the morning. They may be used in winter as well as in summer. In efficacy they are certainly nearly equal to the shower-bath, which may be resorted to in vigorous habits; but when the habit is delicate, and not equal to the reaction, on which the beneficial influence of the shower-bath rests, sponging is preferable. It should not be used when perspiration is present.

Sponging is as beneficial as the shower-bath in rendering the habit less susceptible to cold; and, when conjoined with exercise in the open air and proper regimen, not only asthma, coughs, and catarrhs may be warded off by its employment, but the predisposition to tubercular consumption may be lessened, in a very remarkable degree, by its daily employment.

Fomentations.—These may be regarded as a species of local bathing. Although the decoctions usually employed are useful in aiding warmth, by their soothing or sedative influence, yet they are secondary objects in the application of fometations, the intention being to convey heat, combined with moisture, to the part fomented. Flannel cloths, wrung out of boiling water, by means of two sticks turned in opposite directions, form the best fomentations. If they be shaken up, and laid lightly over the part, they involve a considerable quantity of air, which, being a bad conductor, retains the heat in them for a considerable time. In every process of fomenting, there should be two flannels, each three yards long, with the ends sewed together, to admit of the boiling water being wrung out of them; and the one flannel should be got ready whilst the other is applied. The fineness or the coarseness of the flannel is not a matter of indifference: the coarser it is the less readily does it conduct heat, and the longer it retains its warmth; therefore, it is more efficient for fomenting. White flannel also retains the heat longer than colored flannel.

Stuping is a variety of fomentation useful in many cases, but especially in affections of the eyes. The patient should be his own operator. He should sit up in bed, and should place, in the hollow of his hand, a small piece of flannel, wrung out of boiling water, and hold the hand at such a distance under the eyes that the vapors may rise to them—changing the flannel as often as it ceases to give out warm vapor. If narcotic or sedative

additions are directed, they should be poured hot upon the flannel each time it is changed.

Cataplasms, or Poultices, are modifications of fomentations; they generally consist of pulpy substances capable of absorbing much moisture, and of such consistence as to be applied accurately to any surface, however irregular. Their action, in most cases, depends upon the liquids with which they are moistened and the heat retained by the mass. Cataplasms may be emollient, medicated, or revulsive.

Emollient Cataplasms are usually made of bread and water, linseed meal, Indian meal, slippery elm, etc., and water; or of mashed vegetable substances, such as carrots and marshmallows.

As warmth and moisture are the principal effects of emollient poultices, an excellent substitute for them is lint, dipped in warm water, and laid over the diseased part; the lint should be covered with a towel, in order to prevent evaporation. This mode is much neater and more cleanly than any poultice, and where merely warmth and moisture are required, it will answer all the purposes intended. A peculiar fabric, called *spongio-piline*, consisting principally of sponge, has lately been invented in England, which is said to answer very well, when properly imbued with hot water, as a substitute for the simple emollient poultice.

The addition of a little lard is useful, if the poultice does not require to be frequently changed. When the object, however, is to promote suppuration, the poultice should be frequently renewed, in which case the addition of the lard is unnecessary.

Poultices should never be heavy, nor very bulky, but they should be frequently repeated. They are useful, in all cases of inflammation which cannot be backed, to assist the suppurative process and the advancement of the matter to the surface. After an abscess is opened, the poultices should still be continued for a few days. Poultices may be used, also, as fomentations in colic, and in inflammation of the bowels. In such cases, however, as the chief object is to allay pain and to soothe, they should be made with a decoction of poppy-heads, instead of water.

Medicated Cataplasms are those in which, to the simple emollient poultice, are added other ingredients, intended to exercise an influence on the part independent of mere warmth and moisture; as, for instance, the fermented poultice, in which yeast forms a constituent, the charcoal poultice, and various others enumerated in the Formulary, all intended to fulfil certain indications.

Revulsive Cataplasms are those which, by inducing a local irritation or inflammation of the parts to which they are applied, act as derivatives. To this class belong mustard poultices, or *Sinapisms*, Cayenne pepper, garlic poultices, etc.

Mustard poultices are made by rubbing the flour of mustard, of the shops, with water, into the consistence of a paste. When it is wished to have a weaker preparation, wheaten, rye, or linseed flour is to be added to the mustard in such proportions as are deemed sufficient. The water used should be tepid, or merely warm; a boiling temperature is injurious, as it tends to coagulate the albumen of the mustard, and thus to prevent the extrication of the volatile oil, which is the active principle. Vinegar is often used, but never increases the energy of the preparation, and, in the case of the black mustard, diminishes its power. This poultice should be spread thickly on a rag, as soon as it is prepared, and covered with gauze or tissue paper, in order to prevent adhesion to the skin. In a few minutes after it is applied, the sinapism causes a sensation of heat, which increases to almost intolerable burning. After some time the pain subsides, and is followed by a sense

of weight and throbbing of the arteries. If the sinapism be left on, however, the burning pain again returns, and becomes so great, that few persons can bear the action of a mustard cataplasm longer than three-quarters of an hour.

In delicate, sensitive people the sinapism need not remain applied above six or eight minutes, as the effect continues some time after its removal. If it remains too long on, gangrene may supervene; this cannot happen unless the invalid be insensible, as too much pain is felt to permit the lengthened application of a sinapism; but, in cases of stupor or insensibility, or in low fevers, a sinapism, if left on longer than an hour, may cause both vesication and gangrene. If the redness only is required, the pain may be moderated by mixing with the paste a drachm of tincture of opium, or two drachms of tincture of henbane, neither of which, although they allay the pain, diminishes the rubefacient activity of the sinapism.

As a substitute for the mustard poultice, where mere external irritation is required, the capsicum or red pepper will answer admirably, and it has the advantage of not vesicating: it may be used as a poultice, by mixing the powder with bread and milk, or Indian meal, or as a lotion mixed with warm spirits.

Lotions, Liniments, Embrocations, are medicines of a more or less fluid character, which are employed as external applications. They may be used as mere fomentations to soothe pain and remove inflammation, as a mode of introducing medicinal substances into the system, or as revulsive agents, according to their nature and composition. Liniments, which generally contain oily constituents, are usually aided by friction of the part to which they are applied, either with the hand alone, or with some article capable of exciting some irritation of the skin, as a piece of flannel or a soft flesh-brush. In many cases, in which liniments are found beneficial, the advantage obtained from them is attributable rather to the friction than to any medicinal power in the lotion itself.

Frictions, whether simple or conjoined with liniments, are frequently important aids to medical treatment. Simple friction is performed by the hand alone, or with a piece of flannel, a hair glove, or a flesh-brush. If it be properly performed, namely, by short, brisk strokes with the tips of the fingers, and with great celerity, when the naked hand is the agent; and if it be continued for an hour or upwards, and repeated several times a day—its influence in reducing swelled glands and swellings of the joints, as well as in alleviating rheumatic pains, is very great; but, besides being well performed, the friction should be continued for half an hour, in order to render it useful.

Friction, when performed in a gentle, slow, and equable manner, by producing a continued repetition of an agreeable impression on the nervous system, acts as a soother of pain, independent of any aid from opiate liniments, and also induces sleep. The beneficial influence depends, in a great measure, on its transferring the attention of the sufferer from the seat of pain, and confining it to the mild and agreeable sensation impressed by the friction. In performing it, the operator should sit by the side of the bed, and, introducing the hand under the bedclothes, rub the legs or the arms gently, with equally lengthened, but slow movements. When the invalid is a child, its influence is more powerful when aided by a monotonous, but a soft tune, which, although it operates upon a distinct sense, yet, by combination, renders the friction more soporific.

When friction is intended to stimulate the surface, it is necessary to aid its influence by liniments containing ammonia, or camphor, or some other excitant or acrid substance; but these should be ordered by the medical attendant. In applying them, the same method should be adopted as when

simple friction is employed; but the hand of the operator must be guarded by a glove from the influence of the acrimony of the liniment.

Friction is also used to introduce various substances—namely, mercurials, iodine, opium, etc.,—into the body through the medium of the skin. The rubbing, in such cases, ought to be brisk, and applied with sufficient force to abrade slightly the cuticle; and continued until the substance, which is usually in the form of an ointment, disappears, owing to the absorption by the skin induced by the friction. In using such frictions, the hand of the operator should be guarded by a glove; otherwise, he is likely to suffer salivation, or some other unpleasant result, from the introduction of the medicinal agent into his own system.

VESICATORIES, or BLISTERS, have already been noticed in the introduction (p. 75), and do not require to be further commented upon.

ISSUES are small ulcers artificially established for the purpose of procuring and keeping up a discharge of pus. They form an important derivative remedy in many diseases, and are to be formed by the following methods: the simplest is by the application of a small blister, which is to be dressed with some epispastic or irritating ointment. It is, however, difficult to prevent the sore from healing, and the discharge is seldom sufficiently copious. They are also formed by making incisions through the skin, and inserting issue peas into the wound. The best and most effectual plan is by the use of caustic; this is done by means of a piece of leather, spread with adhesive plaster, through which a hole is made of the size of the intended issue; this is to be warmed and applied to the skin, so as to apply closely. The aperture is then to be filled with the caustic, in the form of a paste, and covered with another piece of leather, spread as above. These are to be left on until the skin is destroyed, and then to be removed and a poultice applied until the eschar separates. The late Dr. Wistar was in the habit of recommending the application of a small blister, and of rubbing the vesicated surface with caustic potassa for a few minutes. This is an expeditious and excellent method, as it is effectual and gives but little pain. The issue is kept open either by the introduction of peas, or a piece of lint smeared with the ointment of savine, into the wound. The peas operate by mechanical irritation; and, as they swell from the action of the heat and the moisture of the ulcer, they tend also to enlarge the wound. The peas should be changed at least once in twenty-four hours. Instead of the peas, it has been advised to use a small block of hard wood, with the lower surface cut into lozenges; these, pressing on the surface of the sore, occasion a copious discharge, and it will be found more convenient of application than peas. The very irritation, however, by which the discharge is maintained is apt to cause fungous growths from the bottom of the wound, which should be kept down; this is to be done by dressing the issue occasionally with some escharotic, as burnt alum or red precipitate. Issues should be washed twice a day with warm water; otherwise, they are apt to become very offensive.

SETONS are wounds kept in a suppurating state by means of some foreign body, which prevents their healing. They are made by passing a seton needle, armed with a skein of silk, thread, or a slip of gum elastic, through a folded portion of the skin, withdrawing the needle, and leaving the silk in the wound. If a seton needle cannot be procured, the puncture may be made with a thumb-lancet or bistoury, and the silk passed through the wound by means of an eyed probe. The edges of the wound are apt, however, after it has been discharging for some length of time, to become callous, and the discharge to cease. When this occurs, the irritating substance should

be smeared with some stimulating ointment. It should be recollected that much mischief may result from suddenly suppressing or removing either an issue or a seton. If this takes place, purgatives should be administered, and the discharge of the issue or the seton checked as gradually as possible.

Ointments are simple or compound fatty bodies of a soft consistence, which are applied to the skin by inunction. They are more consistent than liniments, but softer than cerates. Simple ointment consists of one part of wax and four of lard, melted together and thoroughly mixed. This preparation is the basis of many compound ointments. Compound ointments are of three kinds: one consisting of simple ointment, combined mechanically with various substances; the second, formed by dissolving the active ingredients in melted ointment or lard; the third, made by uniting substances to the fatty matters that induce a chemical action between them.

Compound ointments of the first class are mixtures of the fatty basis with various solid and liquid substances; these are incorporated by trituration in a mortar, or on a stone slab. When hard substances enter into the combination, they require to be previously reduced to a fine powder, or, if they are soluble, to be rubbed into a paste with an appropriate menstruum, and then admixed. When extracts form constituents of an ointment, if they are not of a soft consistence, they should be rendered so by trituration with water before they are mixed with the fatty body. The mixture of two or more ointments may be effected by rubbing them together on a stone slab by means of a spatula.

Compound ointments of the second kind are made by boiling recent vegetable substances in the fatty basis, until all the water of vegetation is driven off; the heat should then be reduced to about that of boiling water, when the ointment is to be strained. Those of the third kind, as citrine ointment, are prepared by adding the constituents gradually together, aided by heat and constantly stirring.

Ointments are preserved by keeping them in glazed jars, with the surface covered with tin foil. According to M. Deschamps, the admixture of a twenty-fifth part of benzoin with the fatty matter used to make the ointment, will prevent or greatly retard the process of decomposition. An ointment of benzoin is now officinal. In the case of ointments for highly irritable surfaces, this plan answers well; where it is inexpedient, the ointments should be renewed at short intervals. The use of yellow in the place of white wax, as formerly employed, likewise prevents the decomposition of the fat.

Cerates consist of a basis of wax and a fatty matter, with which other substances are incorporated. They are of such a consistence as to be softened, but not melted, by the warmth of the body. The general directions for making them are similar to those for ointments.

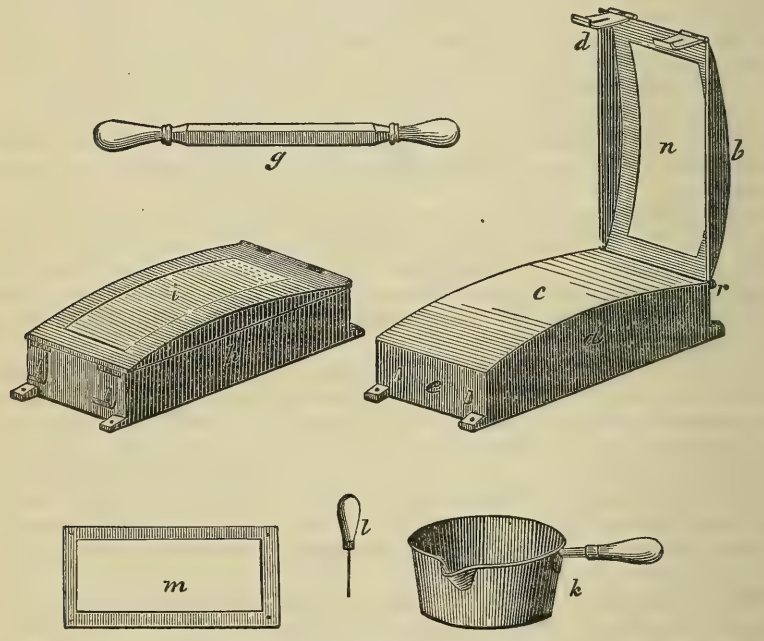
Many preparations of the present class are made by simply mixing or triturating their component parts together. But when resins, wax, spermaceti, or concrete oils are to be mixed either together or with fluid oils, it is better to unite them with the aid of heat, which not only liquefies the solids, but likewise renders them much more soluble in the liquids. Brisk agitation is required while the mixture concretes on cooling; otherwise, the solid ingredients will separate either mechanically or by crystallization. Even in purifying lard or suet by fusion and filtration, it is right to stir the mass as it cools; otherwise, the stearin or solid oil is apt to separate in part from the elain or liquid oil, so that an irregular mixture of the two principles is obtained. A gentle heat is sufficient for making ointments, cerates, and the like, because most of the ingredients are easily fusible; and a strong heat must be avoided, for in that case acrid acids are engendered, which may

alter the properties of the preparation. Hence the vapor-bath is generally used for applying heat; and it ought always to be employed in operations on a large scale.

When the cerate is intended to irritate and not to soothe, a high temperature or prolonged application of heat may be employed, which, in some cases, is advantageous, as in the cerate of cantharides, by more effectually dissolving out the active principle.

Plasters are more consistent than cerates, adhesive at the temperature of the body, and requiring the aid of heat to soften them sufficiently to be spread. They are of two kinds; one consisting of a compound of olive oil and litharge, or an oleo-palmitate of lead, having the common lead plaster as a basis, united to resinous or other substances; the other, composed wholly of resinous matters, or these mixed with fatty substances or wax.

Fig. 37.



Apparatus for Spreading Plasters.

Fig. 37 represents a convenient apparatus for spreading plasters. *a c e* is a solid block of wood, rather larger than the intended plaster, and having the upper surface *c* made slightly convex; *b d* is a tinned sheet-iron lid to cover the block, to which it is fastened by the hinge *r*, and further secured by the clasps seen at *d*; *n* is an oblong opening in the cover of the exact size of the plaster; *m* is a frame for marking the leather into squares. The leather, thus prepared, is placed on the convex surface *c*, the lid *b d* is turned down and fastened by the clasps, as seen in the figure *i h*. The plaster melted in the pan *k* is then poured on the leather *i*, and, by means of the iron instrument *g*, is spread uniformly over its surface. When cool, it is separated from the frame by passing the sharp-pointed instrument *l* around its inner margins.

In making plasters, it is necessary, in most cases, to operate at a temperature that will not volatilize or carbonize the ingredients; hence, a water-bath or steam heat is preferred. In the case of the burnt plaster (*onguent de la mère* of the Paris Codex), sufficient heat is employed to cause the fats to fume. Plasters should be made in metallic vessels, much larger than will contain the substances to be operated upon, as the mass increases in bulk by the action of heat causing an extrication of vapors. The water ordered in making lead plaster should be added at the commencement of the process;

otherwise, when poured on the melted mass, it may cause a projection of portions of the heated materials on the operator. The ingredients should be thoroughly stirred together during the process of melting. When this operation is concluded, the plaster is to be removed, in small portions at a time, into a vessel constantly supplied with cold water; and, when sufficiently consistent, rolled into cylinders on a wet marble, and again placed in cold water to harden. To render plasters of a lighter color, they are kneaded and pulled under water; but this process should not be practised on compound plasters containing substances soluble in water; nor should these plasters be cooled in water, but suffered to chill on a marble slab until fit to be made into rolls. Some of the officinal plasters belong to the second class, and are made by melting resinous matters with the addition of certain oleaginous substances or wax.

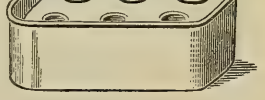
Plasters are preserved by enveloping the rolls with oiled paper, to exclude the air as much as possible. When kept for any length of time, they are apt to become hard and brittle, and to lose their color. When this is the case, they should be re-melted by a gentle heat, and sufficient oil added to restore their proper consistence.

Spreading plasters for use requires skill and address on the part of the operator. They are spread on various textures, but most generally on linen or cotton cloth, or leather. The shape and size must be regulated by the part to which they are to be applied. The plaster is to be spread on the leather or cloth by means of a heated spatula of a peculiar form; this is brought in contact with the end of a roll, which, becoming liquefied, can then be evenly diffused over the surface; or the plaster is carefully fused by heat, and when it has acquired a thick consistence, it is evenly and smoothly spread over the material by means of a spatula heated sufficiently to keep it of a soft consistence. Where the plaster is sufficiently adhesive to maintain its place when applied to the body, it is to be spread so as to leave about half an inch of margin uncovered; but where it does not possess this quality in sufficient degree, it should be surrounded with an adhesive margin, which is to be prepared before spreading the body of the plaster. Full and particular directions for spreading plasters will be found in Procter's edition of *Mohr and Redwood*, p. 516, *et seq.*

Suppositories.—The pharmacopœia gives the following directions regarding their preparation:—

"Mix the medicinal portion with a small quantity of oil of theobroma, by rubbing them together, and add the mixture to the remainder of the oil of theobroma previously melted and cooled to the temperature of 95°. Then mix thoroughly without applying more heat, and immediately pour the mixture into suitable moulds having the capacity of thirty grains each. The moulds, previously made cold, must be kept so by immersion in iced water. All difficulty in removing suppositories from the moulds may be obviated by having the moulds previously dusted with lycopodium. In the absence of suitable moulds, suppositories may be formed by allowing the mixture, prepared as above, to cool, care having been taken to keep the ingredients well mixed, and dividing it into parts, each of which shall weigh thirty grains, and may be made into a conical or other convenient form for a suppository."

Fig. 38.



Suppository Moulds in the Refrigerator.

If moulds are not employed in preparing suppositories, it has been suggested to reduce the butter of cacao, by grating and sifting, into an uniform powder, with a portion of which the medicinal ingredients are to be thoroughly

mixed upon a porcelain slab; the remainder of the butter of cacao is then added, and if care be taken to avoid too much friction, so that the oil is not liquefied, the mixture may at once be rolled out into a cylinder, which is then divided into the requisite number of equal parts, each of which is rolled into a conical shape, either with the fingers or by means of a spatula.

Suppository moulds are made of pewter or brass; a convenient mould for six or more suppositories may be made of plaster of Paris, as suggested by C. E. Dwight in *American Journal of Pharmacy*, 1873, p. 5.

Fumigations are extrications of vapors or gases, designed to modify the air of a sick chamber, and to mask any unpleasant odors that may be present, or to produce a medicinal effect on those parts of the body with which they are brought in contact.

Fumigations, for the purpose of obviating or masking unpleasant odors in a sick room, should never be employed to supersede ventilation and cleanliness; for most of them, instead of purifying the air, only render it more unfit for respiration. They are generally made by burning pastilles, sugar, juniper berries, benzoin, etc., so as to create an odoriferous smoke. As disinfecting agents, they are utterly useless; and are relics of an ancient custom of burning frankincense and other odorous substances in vitiated air, to overcome the fetor which is more or less present. They disguise unpleasant odors; but they accomplish nothing more. The infection remains not only unaltered by the diffusion of the most powerful aromatic vapors, but its deleterious properties are sometimes augmented by them.

The fumes of burning camphor, and the vapors arising from its tincture, have more pretensions than either of the above to the name of a useful article of fumigation. It is much employed and confided in on the Continent; but the experience both of American and British physicians does not warrant the opinion that it possesses any power of destroying infection or contagion. Nothing is more ridiculous than the custom, which was at one time very general, and which is still continued to a certain extent—namely, that of carrying a camphor-bag about the person, as a protection against infectious diseases.

Vinegar is, not without reason, regarded as possessing some chemical influence in decomposing infectious and contagious matters; and consequently, it is almost invariably sprinkled over the floor of the rooms of those suffering under infectious diseases; or the vapor of hot vinegar is diffused through their apartments. It is thought to be still more salubrious, and a more powerful disinfectant, when it holds camphor or aromatic oils in solution; hence the great popularity of the preparations called *Aromatic Vinegar* and *Thieves' Vinegar* (see p. 87). The repute of the latter is founded upon a story, that four thieves, who plundered the dead bodies during the plague at Marseilles, with perfect security, on being questioned respecting the cause of this impunity, confessed, on the condition of their lives being spared, that they attributed it solely to the use of *Aromatic Vinegar*.

Vinegar, in this state of combination, is extremely agreeable and refreshing, both to the invalid and the attendants of the sick room. The benefit which it produces depends upon a certain degree of stimulus imparted to the sensitive nerves, which are generally in a low condition in an infectious atmosphere; but, as a chemical agent, its powers are too feeble to be followed by much benefit. It is, however, always refreshing, and is much better adapted for overpowering the unpleasant odors of the sick room than any of the former substances.

The most efficacious fumigations that can be employed are those of chlorine. This disinfecting gas is extricated from a mixture of common salt, black oxide of manganese, and sulphuric acid (see p. 222). Instead of

chlorine disengaged in this mode, it is more common to use the chloride of lime, the chloride of soda, or the chloride of potash; solutions of either of these, placed in shallow vessels in a room, will give off chlorine in a gradual manner, by a decomposition of their constituents. Some difference of opinion exists as to the mode in which this gas acts. Dr. A. T. Thomson is of opinion that it operates by decomposing the infected air:—

"With regard to the mode in which chlorine operates, the most probable opinion is that it decomposes the infectious matter, which is a compound. One principle of this compound seems to be hydrogen; another ammonia; and a third a fetid volatile oil; besides the unknown matter of infection. The chlorine unites with the hydrogen and forms hydrochloric acid, which combines with the second component of the infectious medium—namely, ammonia—and forms sal ammoniac; the withdrawing of both of which from the air causes the precipitation of the volatile oil; whilst the chlorine also neutralizes the real matter of infection, whatever it may be; and thus the vitiated atmosphere is purified."

Although chlorine is capable of destroying fetid and unpleasant odors in the sick room, it is liable to many objections. However extricated, it is apt to create irritation of the respiratory organs, and coughing, when respired; it corrodes all metallic substances, and must, therefore, be used with caution; from the chlorides evolving the gas more slowly, they are, in most cases, preferable to the immediate extrication of chlorine from salt and manganese.

Other acid fumigations have also been found useful as disinfectants; as those of nitrous acid, so highly recommended by Smith and Carmichael, and considered by Christison even as superior to chlorine. Sulphurous acid fumes, produced by burning sulphur, have likewise been recommended. Both are capable of destroying unpleasant odors and emanations; but the same objections apply against their use in a sick chamber—that of causing much irritation of the organs of respiration; hence they are unfitted to cases where there is any disease or weakness of these parts. Carbolic acid has, of late years, been extensively employed as a disinfectant, and found to possess considerable merit.

Fumigations, used as medicinal agents, are much more prescribed on the Continent of Europe than in Great Britain or the United States. They are sometimes employed as inhalations—as emollient vapors in the treatment of bronchial affections; and balsamic vapors in affections of the chest. They are also used externally, as the fumes of benzoin in rheumatic and gouty complaints; those of aloes in deficient menstruation; those of sulphur and mercury in various diseases of the skin.

The effects of fumigations vary according to the temperature at which the vapors are used; when it is high, and the whole body of the patient is exposed to it, it produces much the same train of symptoms as those caused by a vapor bath. When the fumigation is made with substances which give off no watery vapors, the phenomena that result are analogous to those of a heated air-bath, but more marked, especially those which occur in the skin and subcutaneous tissue.

BLOOD-LETTING.

Various methods are practised for this purpose. General bleeding is performed by opening a vein, called venesection; or by puncturing an artery, which has received the name of arteriotomy. Topical blood-letting is practised by opening the small vessels of a part by means of slight incisions, or what is called scarification, by the application of leeches, and by cupping.

General Blood-letting.—*Venesection* is one of the most frequently employed of the different modes of detracting blood. It is usually practised on one of the veins of the arm. A band or ligature is to be applied around the arm above the point at which the vein is to be opened, so as to obstruct the passage of the blood to the heart; this causes an enlargement and turgidity of the vessel below the ligature. This bandage should never be applied so tightly as to prevent the passage of blood in the arteries of the part. The vein is to be opened by means of a common or thumb lancet, or a spring lancet. In using the first, the vein is to be kept from rolling by means of the thumb of the left hand placed a small distance below where the puncture is to be made; but care should be taken not to alter the relative position of the skin and vein, because in resuming their position after the lancet is inserted, the aperture through the skin will no longer correspond with that in the vein, in consequence of which a thrombus or ecchymosis will form—a very common accident in venesection. The lancet is to be pushed into the vein, and when its point is within the cavity of the vessel, it is to be carried forward a little, so as to enlarge sufficiently the opening. The arm is to be kept extended after the operation until the necessary quantity of blood is taken. If the blood should not flow as freely as is desired, the patient should exert the muscles of the arm by grasping a stick, or moving the fingers.

The spring-lancet is much used in some parts of the United States, and is almost universally employed in Philadelphia. This has arisen, in great measure, from its being preferred to the common lancet by Dr. Physick, as well as by Dr. Dorsey, whose reasons for this preference are thus given in his "Elements of Surgery:"—

"In a country, situated like the United States, where every surgeon, except those residing in the large cities, is compelled to be his own cutler, at least so far as to keep his instruments in order, the spring-lancet has a decided preference over the lancet; the blade of this can with great ease be sharpened by any man of common dexterity, and if not very keen, it does no mischief, whereas a dull lancet is a most dangerous instrument; and no one can calculate with certainty the depth to which it will enter: to sharpen a lancet is regarded by the cutler as one of his nicest and most difficult jobs; it is one to which few surgeons are competent.

"The *safety* of using the fleam is demonstrated by daily experience; there is no country in which venesection is more frequently performed than in the United States, and, *perhaps*, *none where fewer accidents from the operation* have occurred; of these few, I beg leave to state that all the aneurisms produced by bleeding, which I have seen, have been in cases where the lancet was used. I have since, however, met with an exception to this statement. I have seen the brachial artery opened by a spring-lancet, but it was by an old barber, half blind, and very clumsy."

"The manner of using the spring-lancet differs in nothing from the operation with the common lancet, excepting that the surgeon must place the instrument in such a situation over the vein that, when the spring is touched, the orifice into the vein will have a proper size and direction. Dexterity in this is very readily and speedily acquired. In point of *facility* in its use, it has a great advantage over the lancet.

"Among the advantages of the spring-lancet, *economy* is not the least. A country practitioner who is constantly employing the English lancets, and who is particular in using none but the best, must necessarily consume half the emolument derived from the operation in the purchase of his instruments. One spring-lancet, with an occasional new blade, will serve him all his life."

After a sufficient quantity of blood has been drawn, the flow is to be stopped by removing the ligature and placing a finger on the orifice, when

any blood that has soiled the arm is to be wiped off, and the edges of the orifice carefully brought together, that they may unite by the first intention. To accomplish this, let the bleeder, with the thumb of that hand which holds the arm, push the skin towards the orifice, while he draws it on the other side to the same point with the compress; thus the skin will be thrown into folds at the wound, over which he is immediately to apply the compress, which should be broad, to keep the skin better together, and thick, to make the compression more certain.

When blood-letting is ordered, everything required for the operation should be at hand. The ligature for tying the arm, so as to obstruct the flow of blood in the veins below it, should be a soft old ribbon; and the same may be employed for securing the pledget over the orifice, when the flow of the blood is to be stopped. The pledget or compress should be a piece of linen, folded into a square form, about an inch in diameter, and comprehending three or four thicknesses of the material. It is always proper to use a graduated basin for receiving the blood, that the exact quantity drawn may be ascertained. If the invalid be bled in bed, he should sit erect; if he be up, he should be placed erect in a chair. When the operator is dexterous, there is little or no necessity for guarding either the bed or the clothes of the patient from the blood; as the pressure of the thumb of the operator, placed below the point where the vein is to be punctured, should not be relaxed until the utensil for receiving the blood be conveniently placed for that purpose. A basin with a little tepid water, and a clean, soft towel, should be ready for washing and drying the arm, before the compresses and the bandage for preventing the further escape of the blood be applied.

When a nurse or an attendant is not fully instructed in her duty, there is always considerable anxiety displayed to provide smelling salts and other means to obviate fainting. But, in many cases, much of the benefit of blood-letting depends on the fainting which it causes; and the propriety of checking that effect should be left entirely to the physician. No person should be present at this operation, nor should any one attempt to hold the basin for receiving the blood, who is liable to become sick or faint at the sight of blood.

The arm should not be used for some hours after a vein has been opened in it; but, if everything has gone on well, the bandage may be removed at the end of two days. When this has been applied too tightly, the forearm and hand are apt to swell and become painful, in which case the bandage is to be loosened. If, on removing the bandage, it is found that the orifice, instead of being closed, presents an inflamed appearance, with its lips swelled and red, the arm is to be kept perfectly quiet, the edges of the wound brought in contact, and some cool application made to the part, to relieve the inflammation. In those cases where the inflammation extends beyond the orifice, and assumes an erysipelatous appearance, with a hard and painful tumor around the wound, a compress is to be applied upon the vein at the inflamed part, to make the two sides adhere together; if they do not adhere, simple contact will still be sufficient to prevent suppuration in this part; or, if inflammation has gone so far as to make the surgeon suspect that suppuration has taken place, then the compress must be put upon that part of the vein just above the suppuration.

The remedy for inflammation of the veins consequent on venesection, which answers best, is the application of a blister over the inflamed part. As soon as the inflammation commences, a small plaster of simple cerate, spread on linen, should be applied on the orifice, and over this, a blister large enough to cover the whole inflamed part, extending three or four inches from the orifice in every direction. This remedy was first proposed, and made use of, by Dr. Physick, and has been employed by many physicians with great success, even after extensive inflammation of the vein has taken place.

Sometimes it becomes expedient to open the external jugular vein. To do this, the head should be laid on one side, and the vein compressed by the operator's thumb near the clavicle, and the opening made in that part of the vein which lies over the sterno-cleido-mastoid muscle.[1] The blood soon ceases to escape after the pressure is removed, but a small strip of adhesive plaster is necessary.

In children, especially where they are very fat, a vein in the leg or foot can often be found, especially about or above the malleolus, when none are perceptible in the arm. To promote their distension, and to increase the bleeding when they are opened, it is found useful to immerse the limb in warm water.

In bleeding young children from the arm, when they are restless and fretful, it is a good plan to attach the child's arm to the left forearm of the operator, by means of ligatures at the wrist and centre of the arm; by this means, complete control is obtained over the motion of the child's arm, and the venesection can be accomplished with comparative ease.

ARTERIOTOMY is the opening of an artery to detract blood. It is much more limited than venesection in its application, being practised only upon the temporal and posterior auricular arteries; and, in most cases, is restricted to the former only. In this, the anterior branch is preferred, where it passes above the exterior angle of the eyebrow. In performing the operation, the vessel is to be partially divided transversely, and not longitudinally. When as much blood has been drawn as is deemed necessary, the incision is to be deepened so as to divide the artery entirely. On the consequent retraction of the cut extremities, the bleeding will generally cease; if it should not, a graduated compress, maintained in place by a bandage around the head, is to be applied.

TOPICAL BLOOD-LETTING.—This consists of the abstraction of blood by cupping, leeching, or scarification.

Cupping is performed in the following manner: The skin being softened by means of a sponge and warm water, a small bell-like glass, known as a cupping-glass, having the air contained in it rarified by being passed over the flame of a lamp, or by other means, is immediately applied to the part, all hair and other extraneous substances being previously removed; from the formation of a vacuum beneath the cup, the pressure of the air on the surrounding surface causes that portion included in the cup to swell, and the vessels to become turgid. When this has taken place, the cup is removed and several incisions made by means of a scarificator, an instrument containing numerous lancets, which, by means of a spring, can make a corresponding number of incisions at the same moment; the depth of these incisions can be regulated by means of a screw which protrudes or withdraws the lancet, according to the vascularity of the part, the quantity of blood to be drawn, etc. When a sufficient quantity of blood has collected in the cup, it is to be removed by introducing the nail of one of the fingers under the edge, by which means, air being allowed to enter, the cup becomes detached. The part being washed with warm water to remove any clots of blood, the cup is again to be applied as above, and the operation continued till a sufficient quantity of blood is obtained. Sometimes, especially when applied to the scalp, the cups fill so rapidly with blood, as to become detached almost immediately on being applied.

[1] In bleeding from the jugular vein, it is generally advisable to compress both of the external jugulars. This is easily done by placing the thumb of the left hand upon one jugular vein, and the forefinger of the same hand upon the other. If this point is not attended to, the operation may fail, in consequence of the free anastomosis across the neck, and the passage of the blood downwards upon the opposite side.

For the operation of cupping, a basin of hot water, sponges, and clean soft towels are to be provided. It is generally considered as a severe and painful operation; but this is not the case, if the operator understands his business. This is readily ascertained by observing the manner in which the cups are applied, and the rapidity with which they are filled. A good cupper does not exhaust much of the air in the cup before applying it, but simply passes its mouth rapidly over the flame of a lamp; for, when it is held over the flame even for a few seconds, the compression of the edge of the cup upon the skin is so great, that it operates as a ligature, and checks the flow of the blood to the scarified part; hence very little blood is procured. A good cupper, also, removes the cups without spilling the blood which they contain; and the whole operation is completed in a short time.

In our large towns, it is but seldom that physicians, nurses, or those attending in a sick room, are called upon to perform the operation of cupping, as professional cuppers are readily to be obtained; but in small towns or villages, this is not the case, and the duty devolves either upon the physician or on those acting as nurses; and hence some directions are necessary to those unaccustomed to this task. Few are found sufficiently expert to exhaust the air in the cup by means of the lamp; and even among the professional cuppers in this city this mode is very rare, though, when properly performed, it is by far the best. The usual plan is to rarefy the air in the cup by means of a small cone of paper, dipped in spirits of wine, or strong brandy; this is ignited and thrown into the cup, which is instantly to be applied to the intended spot. Where the proper cupping-glasses and scarificator are not to be had, wineglasses or very small tumblers may be substituted for the first, and small incisions by means of a thumb-lancet will answer the purpose of the latter. A very convenient apparatus may be obtained at most of the surgical instrument-makers, consisting of cups and an exhausting syringe fitted to them, by which even the most inexperienced nurse can perform the operation of cupping.

The cicatrices of the scarifications leave a permanent mark; on which account, females should not be cupped upon the nape of the neck; but when blood is to be drawn from the head, the glasses should be applied behind the ears, and a portion of hair removed in such a manner that it may be covered by what remains.

When cupping-glasses are applied without any scarification being practised, the operation is called *dry cupping*, and is much used to cause a speedy irritation of the skin for the relief of oppression of breathing, local pains, etc. To obtain the full benefit from this operation, the cups should be suffered to remain upon the part until they cause an exudation of a small quantity of serum, or great irritation of the part. The application of dry cups has been found extremely beneficial in poisoned wounds; they act not only by abstracting the poison, but also, by the pressure they exercise on and around the part, in preventing the absorption of it. The experiments of Dr. Barry in England, and of Drs. Pennock and Rodrigue in this country, show unequivocally the value of this plan of treatment.

Leeching consists in the application of leeches to any vascular part of the body. These are annulated animals, having an extensile, soft body, terminated at each extremity with a muscular disk, the anterior of which is furnished below with a mouth having three crescentic jaws, armed with numerous sharp teeth. To draw blood, the leech first renders the part tense by means of the anterior disk, which acts like a cupping-glass, and then makes a triangular wound by a saw-like motion of its tri-radiate jaws; it then draws the blood by suction, until it is completely gorged, when it detaches itself and falls off.

Leeches are seldom properly applied or managed. The part to which

they are intended to be applied should be washed with a little soap and warm water, then with simple cold water, and, lastly, it should be well dried. If the part be hot and inflamed, the leeches should be put, for a few minutes, into tepid water; and this should be done, also, when they are to be applied in the mouth, or to any part of the body warmer than the general surface; but, at all times, before they are applied, they should be dried between the folds of a clean soft towel. The easiest and best mode of applying them is, first, to place the number to be used in a hollow made with the points of the fingers in a towel folded like a napkin; then, so to turn the towel and the leeches upon the part where it is intended they should fix, that the towel will cover them. The hand must be kept over the towel, to prevent their escape, until they all bite, which usually happens in a few minutes; after which, the towel may be removed. By this method, twenty or thirty leeches can be applied more rapidly and with less trouble than two, when each leech is separately applied. Another plan is to put the leeches into a pill-box or small glass, and apply this over the part to which it is designed they should attach themselves. If this plan, however, cannot be pursued, owing to the nature of the part to which they are to be applied—as, for example, the inner or outer angle of the eye—then the simplest method is to scratch the skin with the point of a needle, and to apply the leech to the spot moistened with blood. When they are to be applied within the mouth, or any open cavity, each leech should be put into a large quill, with its head towards the open end of the quill, which should be applied to the part, and retained upon it until the leech is fixed, when the quill may be gently withdrawn; but a thread should be tied round the tail of the leech when it is to be applied within the mouth, to prevent it from being swallowed—an accident which has occasionally happened, and has been productive of serious consequences.

Leeches should never be forcibly detached, as their teeth are apt to separate, and, being left in the wound, to cause an erysipelatous inflammation of the part. They should be permitted to drop spontaneously, which being the result of a temporary suffocation (*asphyxia*), all muscular energy ceases in the animal, and, the teeth shrinking, it drops off entire. A bread-and-water poultice, not too hot, should then be laid over the bites, to encourage the bleeding. The invalid should be kept warm in bed when it is necessary to abstract a large quantity of blood. In general, the bites soon cease to bleed; but, in some instances, a copious flow takes place; and, therefore, to prevent exhaustion, the poultice should be frequently examined. This exhaustion is more likely to occur in children than in adults; and, for the same reason, leeches should not be applied upon children late in the evening unless they are very urgently required. It is also proper, in young patients, to select for their application a part which admits of pressure; for example, the thorax and temples, where the bones are covered with a thin layer of soft parts. Sometimes the hemorrhage continues so as to become alarming; in such cases, where pressure is unavailing or cannot be practised, creasote or some of the styptics applied to the bites will be found useful. Powdering the spot with rye flour has also proved effectual. When these means fail, cauterizing the bites by means of a fine point of nitrate of silver, or with a red-hot probe or knitting-needle generally proves successful.

Scarifications are slight incisions made in a vascular part, in order to relieve the engorged capillaries; they are practised in inflammations of the conjunctiva, and in those of the tonsils, with much benefit in many cases. The operation is very simple, consisting merely in dividing the surface of the inflamed parts to a slight depth with the point of a lancet or scalpel, and encouraging the bleeding by means of warm water.

POISONS.

Poisons are usually defined to be substances of an animal, vegetable, or mineral nature, which, when administered in a small quantity, are capable of producing deleterious effects on the animal economy, and, in some instances, of causing the same consequences when applied to the surface of the body. But this definition is not strictly accurate, and is not applicable to all cases of poisoning; nor is it, perhaps, possible to give in a few words such an one as would include all poisonous agents. Poisons are usually arranged according to their action on the system; but, as the alphabetical plan has been pursued in the main body of this work, it will be continued in the present instance. For full information on the subject, the reader is referred to the work of A. S. Taylor, "On Poisons in relation to Medical Jurisprudence and Medicine."

General Antidote for poisoning, in which the nature of the poison is unknown:—

R. Calcined magnesia,
Pulverized charcoal, } equal parts, in a sufficient quantity of water.
Sesquioxide of iron,

This preparation is perfectly innocent, and is very likely to be efficacious, for its ingredients, though simple, are antidotes to the most common and active poisons.—*Bull. de Thérap.*

Acid, Acetic.

Symptoms.—Great heat and burning pain in the stomach, convulsions, death.

Morbid Appearances.—Mouth and fauces brownish; lingual papillæ enlarged; œsophagus lined with a brownish adventitious membrane; stomach livid and even blackened; vessels much injected.

Antidotes.—Magnesia or its carbonates mixed into a cream with water; soap, and the alkalies.

Acid, Arsenious, or Arsenic.—A metallic, corrosive poison.

Symptoms.—A metallic, austere taste; a great flow of saliva; nausea and vomiting; fainting, great thirst; a sensation of heat in the stomach, which, in many cases, rejects the mildest fluids; much griping, tenesmus, and purging; the stools being dark-colored and very offensive; the urine scanty and high-colored; the pulse small, frequent, and often intermittent; distressing palpitation of the heart, with labored respiration and cold sweats; prostration of strength; sometimes paralysis of the extremities, delirium, convulsions, etc.

Morbid Appearances generally confined to the stomach and intestines; in the stomach, in the form of intense inflammation, but not of erosion or abrasion; the inflammation is also evident in the upper intestines, but slight in the colon, though often violent in the rectum. The morbid appearances of other organs various. Sometimes no morbid phenomena to be found.

Tests.—In the solid state: it is entirely sublimed by heat. If mixed

with charcoal, and heated in a suitable test-tube, deoxidated arsenic will be obtained in the form of a metallic coating inside the tube; and this may be reconverted into arsenious acid by urging it in various directions along the tube with the aid of a minute spirit-lamp flame; the facets of the crystals thus formed (on the cooler situations) will be seen in some places with the unassisted eye, but more distinctly by means of a four-power lens.

In solution: ammoniacal nitrate of silver produces a lemon-colored (*arsenite of silver*) precipitate. Ammoniacal sulphate of copper throws down a grass-green (*arsenite of copper*) precipitate. Transmission of sulphuretted hydrogen produces a bright-yellow (*sulphide of arsenic*) precipitate. Lime water precipitates a white (*arsenite of calcium*) powder; but this test is not one to be relied upon.

Placed with zinc and diluted sulphuric acid in Marsh's apparatus, the arseniuretted hydrogen thence arising, when lighted, will deposit metallic arsenic on a piece of glass held within the flame.

Reinsch's Test.—Acidulate the suspected liquid with muriatic acid, and boil copper wire or foil in it for ten minutes. The arsenic is deposited on the copper as a white alloy, from which it can be separated as arsenious acid, by subjecting the copper, cut into shreds, to a low red heat in the bottom of a small glass tube.

The precipitates referred to, if washed and dried, may be treated as directed above for arsenic in the dry or solid condition.

In testing suspected matters obtained from the stomach, these (and, in cases of death, the stomach itself) must be cut or broken down, and boiled during, at least, three-quarters of an hour: if not sufficiently fluid, add distilled water. Strain, and with addition of a small quantity of potassa again boil during a quarter of an hour, and filter. If this liquor manifest either alkaline or acid reaction, neutralize with potassa, or with acetic acid, as may be required; then acidulate it faintly with hydrochloric acid. Solution of nitrate of silver will remove the acid; and solution of chloride of sodium will precipitate any excess of silver. The liquor may now be experimented on with the above tests.

Treatment.—Abundant draughts of sweet milk, gruel, decoctions of starch, or oily mixtures; tickling the fauces, etc., to induce vomiting; the stomach-pump; emetics of sulphate of zinc. Hydrated sesquioxide of iron (newly prepared, *v.* process, p. 293), in large doses, is the only antidote of reliance.

Light magnesia may be used with advantage, until the hydrated peroxide of iron can be procured.

Afterwards combat any inflammatory symptoms by the usual means, and let the patient subsist, for a long time, wholly on the blandest diet.

All arsenical poisons have much the same action, and similar means are to be used for their detection and for counteracting their effects.

ACID, BORACIC.—This is said to be very virulent; but no instances have been recorded of its fatal effects on man.

Tests.—Not very soluble in water; soluble in alcohol, which, when inflamed, burns with a rich green color; soluble in the caustic alkalies.

ACID, CARBONIC.—This gas is freely liberated in respiration, combustion, and fermentation, as also in the calcination of lime; and is found in coal mines, wells, and cellars.

Symptoms.—Great drowsiness, giddiness, difficulty of respiration, loss of muscular power and sensibility, and coma. The whole body, but especially the face, appears swollen and livid; eyes are unusually prominent, and retain their brilliancy for some time.

Tests.—It extinguishes a taper if the proportion be above twelve or fif-

teen per cent.; lime water, or a solution of subacetate of lead, is precipitated white by it.

Treatment.—Remove the person into the open air, and elevate the head; dash cold water over him, apply stimulating frictions to the thorax and extremities, and use artificial inflation of the lungs; as soon as the patient can swallow, stimulants may be cautiously administered; but, if there are signs of oppression of the brain, venesection is to be performed.

ACID, CITRIC.—In large doses, acts as an irritant poison; but no fatal case in the human subject has been recorded.

ACID, HYDROCYANIC or PRUSSIC.—An extremely active, sedative poison.

Symptoms.—When the dose is large, almost immediate death ensues; in smaller quantities, it causes pain in the head, stupor, nausea, faintness, vertigo, and loss of sight; followed by difficulty of respiration, dilated pupils, a small vibrating pulse, and syncope, which will end in death if curative means are not employed.

Morbid Appearances.—None; but a strong odor of the acid is exhaled from the stomach.

Tests.—The (bitter almond) peculiarity of its odor. When a little potassa is mixed with liquids containing this poison, and solution of the sulphate or sesquichloride of iron added, a grayish-green precipitate is thrown down—which deepens to a Prussian-blue tint on addition of a few drops of sulphuric acid. The nitrate of silver produces a white (*cyanide of silver*) precipitate; which, after being washed and dried, and then held on a watch-glass over a flame, burns with a fresh rose-color, cyanogen being at the same time evolved.

Sulphur Test.—Place two drops of a solution of hydrosulphate of ammonia, containing an excess of sulphur, in the centre of a watch-glass, and invert it accurately over the vessel containing the poisoned liquid. Remove the glass in three or four minutes, and dry the moistened spot gently over a spirit-lamp. Let a drop of water fall on the white film, and then a drop of the perchloride of iron. If prussic acid be present, a blood-red solution (sulpho-cyanide of iron) is produced; and this red color is discharged by the addition of one or two drops of a solution of corrosive sublimate.

When a mixture is to be examined, containing matters from the stomach, etc., if alkaline, it must first be neutralized by addition of sulphuric acid, then one-eighth part cautiously distilled therefrom into a receiver immersed in some frigorific mixture; and the product may then be tested by nitrate of silver, etc., as above.

Treatment.—The internal remedy best calculated to act chemically on this poison, is carbonate of potassium in solution, quickly succeeded by watery solutions of sulphate of iron (with the intention of decomposing the acid, and forming the less injurious substance named *Prussian blue*); but the instances of success by these, or, indeed, by any other kinds of treatment, are extremely rare. Inhalation of chlorine gas, ammonia, etc.; artificial respiration; exhibition of energetic stimulants, such as brandy, liquid ammonia; chlorine-water, chloride of soda and of lime, have all been extolled, and may be tried. Mustard poultices to the stomach, and cowhage applied over the chest; venesection at the neck, temples, etc.; and affusion of cold water to the head and spinal region, are more likely to prove timely excitant and effective remedies. Employment of the stomach-pump, emetics, etc., seems a most improbable means of relief—or, rather, a waste of time.

ACID, MURIATIC or HYDROCHLORIC.—A corrosive mineral poison.

Symptoms.—Sensation of burning in the throat and stomach, styptic taste in the mouth, much thirst; the eyes red and sparkling; the pulse frequent

and tense; the skin hot and dry; the tongue red and glazed; the lips black; vomiting of blood and yellow matter, having the peculiar smell of the acid; cold sweats, delirium, etc. Orfila also says, a thick white fume, having the penetrating odor of the acid, issues from the mouth.

Morbid Appearances.—Mouth, fauces, throat, and stomach highly inflamed, of a deep-red color; mucous membrane sometimes detached or destroyed, sometimes perforated; contents of the stomach yellow or dark green.

Tests.—Characteristic acid taste. The presence of muriatic acid in small proportion is at all times demonstrable in the juices of the stomach; therefore proof of its presence in *excess* is required in cases of poisoning. When a piece of glass, wetted with this acid, is held close to *liquor ammoniæ*, so as to let the vapors of both meet, white (*chloride of ammonium*) fumes are formed. Solution of nitrate of silver produces a white (*chloride of silver*), curdy-looking precipitate.

Treatment.—The immediate administration of soap, magnesia, soda, or potassa, mixed in bland demulcent drinks, to be followed by the free use of emollients and mucilages. If patient survives the first effects of the poison, employ antiphlogistic means to overcome the supervening inflammation.

Acid, Nitric, or Aqua Fortis.—A corrosive mineral poison.

Symptoms.—Much the same as those produced by the last-mentioned poison.

Morbid Appearances.—In cases where death has occurred soon after the ingestion of the poison, the most striking appearance is a layer of yellow matter on all parts reached by the acid. The lips, chin, and hands of the person are also often stained with orange-colored spots. Perforations of the stomach are found in most cases.

Tests.—The orange-colored fumes that are given off, when it is boiled with copper filings, are characteristic. It reddens morphia, and blackens a solution of protosulphate of iron. A fluid containing it, on the addition of carbonate of potassium, forms nitre, which may be known by its deflagration, or by powdering a small portion, and placing it in a glass tube with some fine copper filings, moistening with water, and adding a few drops of sulphuric acid—when, if it be nitre, there will be an evolution of the orange-colored fumes of nitrous acid.

Treatment.—The administration of magnesia or chalk in some bland fluid, then the free use of demulcents, and subsequently the employment of antiphlogistic means to subdue inflammation.

Acid, Oxalic.—A corrosive vegetable poison.

Symptoms.—Burning heat of the stomach, nausea; sometimes vomiting, but at others, ineffectual efforts to discharge the contents of the stomach; great prostration of strength, violent pain, spasmodic respiration, convulsions, etc. When the patient survives the first effects of the poison, all the symptoms of violent inflammation of the alimentary canal are developed. In a diluted form, it appears to cause paralysis of the heart or symptoms of cerebro-spinal disease.

Morbid Appearances.—Tongue and fauces usually covered with a viscid white coat; the stomach containing a dark-brown mucous fluid, and its substance of almost a gelatinous consistency. In some cases, no traces of the action of the poison are perceptible; but, when death does not occur for some time, the alimentary canal is found inflamed.

Tests.—In solid state: has the characteristic sour taste of most acids; and produces the same changes as they do on vegetable blues. When placed in water, a crackling sound accompanies the solution of its crystals.

In solution: Solution of chloride of calcium produces a white (*oxalate of calcium*) precipitate; which is insoluble in acetic acid, but soluble in nitric acid. Solution of nitrate of silver also throws down a white precipitate, which, on being carefully dried by aid of heat, on bibulous paper, acquires a brownish outline, and towards the end shows some slight explosions.

Treatment.—Mixtures of magnesia, chalk, whiting, or plaster scraped from off the inside wall of an apartment, mixed with water (the amount of the latter being as small as convenient for swallowing); abundant drinks *subsequently*. No alkalies should be employed.

ACID, SULPHURIC.—A corrosive mineral poison.

Symptoms.—An austere styptic taste in the mouth; a sensation of burning heat in the throat and stomach, followed by nausea, vomiting, and much fetor of the breath. The matters vomited contain both venous and arterial blood. Signs of great inflammation of the abdominal viscera soon manifest themselves, with difficult respiration, a croupy cough, and a small, frequent, irregular pulse; great anxiety and restlessness, convulsive motions of the muscles of the face and lips; sometimes a papulous eruption precedes death.

Morbid Appearances.—These are not always to be found, except in the fauces and larynx, which, in most cases, present evidence of the highly corrosive action of the poison. The stomach is sometimes found to contain a quantity of dark grumous matter, and is much distended with fetid gas—its membranes ulcerated, dark colored, and having numerous corroded spots, and even perforations.

Tests.—The acid may be in a concentrated or a diluted state. If in the former, any organic matter placed in contact with it is blackened and charred; when mixed with an equal bulk of water, much heat is evolved; when boiled with copper filings or mercury, sulphurous acid gas is evolved. When the acid is in a diluted state, the best test is nitrate of barium, which causes a dense white precipitate of sulphate of barium; this can be verified by calcining it for some minutes with an equal weight of charcoal, wrapped in platina foil, then introducing the residue into a glass tube and adding a few drops of muriatic acid. This will cause an extrication of sulphuretted hydrogen, which can be recognized by its odor, and by its blackening carbonate or acetate of lead.

Treatment.—The same as for the other mineral acids.

ACID, TARTARIC.—A corrosive vegetable poison.

Symptoms.—Very analogous to those caused by oxalic acid.

Morbid Appearances are likewise similar to those produced by oxalic acid.

Tests.—When heated on platina foil, it burns with a pale reddish flame, and exhales a peculiar acrid vapor, leaving much carbonized matter. When a solution is treated with lime water, it affords a white precipitate, soluble in an excess of the acid; when treated with caustic potassa, it affords a granular precipitate of the bitartrate.

Treatment.—The same as for oxalic acid.

ACETATE OF COPPER. *See* Copper.

ACETATE OF LEAD. *See* Lead.

ACETATE OF MORPHIA. *See* Opium.

ACONITE. *See* Vegetable Poisons.

ALCOHOL.—A narcotico-acrid poison.

Symptoms.—These vary according to the dose. In small quantities, there is mere excitement. In large doses, much excitement, with delirium, confusion of intellect, followed by somnolency; nausea and vomiting, and even coma and apoplexy. When an undue portion has been swallowed, it often proves instantly fatal; it may also prove fatal by occasioning or aggravating other diseases. The effects of an habitual use of it are diseases of the viscera, and various mental and nervous disorders. The symptoms of poisoning with alcohol may be mistaken for those of epilepsy or apoplexy.

Morbid Appearances are inflammation, softening, etc., of the mucous membrane of the stomach, congestion of the cerebral vessels, and sanguineous or serous extravasation of the brain or lungs.

Tests.—Odor of the contents of the stomach, or of matters ejected from it. The chemical proof consists in removing the contents of the stomach, mixing them with distilled water, filtering and distilling in union with carbonate of potassium or sodium; the product is mixed with fused chloride of sodium, and again distilled. Alcohol will be found in the receiver.

Treatment.—Withdraw the contents of the stomach as speedily as possible, by a stomach-pump; afterwards an emetic of salt and water should be given in large doses, and repeated, at short intervals, till the stomach is well cleared. The cold affusion is useful in some cases. Ammonia may be employed as a stimulant, and general symptoms obviated by blood-letting; but this must be employed with great caution.

ALKALIES.

AMMONIA.—A corrosive poison.

Symptoms.—Excoriation of the mouth and fauces; burning sensation in the throat and stomach, usually followed by vomiting and purging, the ejected matters being often bloody. When the quantity taken is large, an immediate feeling of strangulation ensues, attended with convulsions. If the result is fatal, it quickly follows the ingestion of the poison. The inhalation of ammonia by the nostrils, when too freely used in cases of fainting, has caused the same symptoms as when taken into the stomach.

Morbid Appearances.—Marks of high inflammation of the parts with which the poison has come in contact.

Tests.—The pungent odor; its alkaline reaction—but which is dissipated by heat. By causing a yellow precipitate with a mixture of arsenious acid and nitrate of silver; by producing a rich violet-blue solution with the salts of copper; by yielding a yellow precipitate with the bichloride of platinum; by giving a white precipitate with the bichloride of mercury; and forming white fumes with chlorine or hydrochloric acid.

Treatment.—The immediate administration of vinegar or one of the vegetable acids, and afterwards the copious use of demulcents. When ammoniacal vapor has been inhaled, the patient should inspire the vapor of vinegar.

POTASSA.—A corrosive mineral poison.

Symptoms.—An acrid, caustic, urinous taste in the mouth; a sensation of burning heat in the throat; nausea, and sometimes vomiting of bloody matters. The surface cold and clammy; the pulse quick and feeble; hypercatharsis, and violent colicky pains.

Morbid Appearances.—Strong marks of inflammation in the alimentary canal, softening, erosion of the mucous coat, and, in some cases, perforation of the stomach.

Tests.—Alkaline reaction; precipitation of nitrate of silver in the form

of a dark-colored oxide. Carbonic acid water causes no precipitate. A concentrated solution, acidulated with muriatic acid, affords a deep-yellow precipitate with bichloride of platinum. A solution of tartaric acid causes a white precipitate of cream of tartar.

Treatment.—Give vinegar and the diluted vegetable acids; to be followed by a free use of demulcents, or oleaginous mixtures.

SODA.—A corrosive mineral poison.

Symptoms and Morbid Appearances.—Analogous to those following the use of potassa.

Tests.—Caustic soda in solution is not precipitated by bichloride of platinum or tartaric acid; its alkaline nature can be ascertained by the usual tests. Antimoniate of potassium affords a white precipitate when added to the salts of soda. Soda tinges the outer flame of the blow-pipe yellow.

Treatment.—The same as for potassa.

ANTIMONY.—Metallic antimony is not regarded as a poison; but its vapor is said to cause unpleasant symptoms when respired.

ANTIMONY, TARTARIZED, generally known as TARTAR EMETIC, is an irritant metallic poison.

Symptoms.—Nausea and severe vomiting, hiccough, cardialgia, burning heat at the epigastrium, severe colic and purging, small and rapid pulse, cold skin, syncope, difficult respiration, vertigo, insensibility to external stimulants, painful cramps in the lower extremities, and great prostration of strength.

Morbid Appearances.—The stomach and intestines often much inflated with gas; their mucous membrane red, and covered with a slightly adhering viscid layer; the peritoneum of a dark brick-red hue; the membranes of the brain displaying marks of inflammation.

Tests.—In a solid state, add charcoal, introduce into a test-tube and expose to heat; metallic antimony will be found of a grayish-black lustre. In the state of solution, diluted nitric acid causes a white precipitate. Sulphuretted hydrogen throws down a reddish-orange precipitate. Solutions containing tannin cause a copious, curdled, whitish-yellow precipitate. Should matters from the stomach be present, the solution must be well agitated with a small portion of muriatic and tartaric acid; then filtered previous to being experimented upon.

Treatment.—Encourage vomiting by free administration of warm water and other diluents, or employ the stomach-pump, if necessary. Infusions, tinctures, or extracts, containing tannin, are very useful by decomposing the poison.

BARYTA, AND PREPARATIONS OF.—The only preparations of baryta that have caused death are the CARBONATE and CHLORIDE.

Symptoms.—Those of irritation, combined with an affection of the brain and nervous system, as vertigo, convulsions, and paralysis.

Morbid Appearances.—Evidences of inflammation of the mucous coat of the stomach.

Test.—In solution: Sulphuric acid throws down a profuse dense white (*sulphate of barium*) precipitate. Solution of nitrate of silver also produces a white (*chloride of silver*) precipitate with the chloride of barium. Sulphuretted hydrogen produces no change of appearance; which circumstance, being peculiar to salts of barium, is valuable as a *negative* test.

Treatment.—Sulphates of magnesium or sodium in solution in water, if the patient is seen early; they are, however, of little use where the carbonate

has been taken. In this case, a mixture of sulphate of magnesium and diluted vinegar, together with emetics and the stomach-pump, should be used.

BELLADONNA. *See* Vegetable Poisons.

BISMUTH.—The only preparation that has caused death is the SUBNITRATE.

Symptoms.—Burning pain in the throat, nausea, vomiting, and diarrhœa, accompanied by coldness of the extremities, and spasms.

Morbid Appearances.—Inflammation of the fauces and œsophagus, redness of the stomach and intestines.

Tests.—In substance: Dissolve in nitric acid, without change of color, and without effervescing, which distinguishes it from a *carbonate.* Sulphuric acid produces no precipitate, thus disproving the possible idea of its being a preparation of *lead.* Dissolve it in nitric acid, and add solution of potassa so long as any precipitate is thrown down; gather this in a filter, and, after washing and drying it, place it on charcoal, and treat it as directed for preparations of lead, when its reduction to the metallic condition will be effected.

The nitrate is decomposed by being poured into a large quantity of cold water, yielding an insoluble subnitrate. The latter salt is blackened by exposure to sulphuretted hydrogen gas.

Treatment.—Induce vomiting by tickling the fauces, etc., and give continuous full draughts of sweet milk.

BROMINE.—An irritant, corrosive mineral poison.

Symptoms.—Irritation and inflammation of the parts with which it comes in contact, whether in substance or in vapor.

Morbid Appearances.—Fauces, œsophagus, and stomach inflamed and corroded, mucous membrane gelatinized, duodenum of a yellow color, and thickened; the parts retaining a strong smell of the poison.

Tests.—Its color, odor, and volatility. All solutions containing it are rendered colorless by the addition of potassa. On being evaporated, the residue is to be incinerated at a low temperature, the ash dissolved in distilled water, filtered, and chlorine passed through the solution. On the addition of ether, the bromine is taken up by that fluid. With nitrate of silver it affords a yellowish-white (*bromide of silver*) precipitate.

Treatment.—The immediate and free use of albumen or starch, and magnesia; inhalations of sulphuretted hydrogen.

BRUCIA. *See* Vegetable Poisons.

CALOMEL. *See* Mercury.

CAMPHOR. *See* Vegetable Poisons.

CANTHARIDES.—An acrid and corroding animal poison.

Symptoms.—A burning sensation in the throat; violent pain in the stomach and bowels; nausea, vomiting, and purging—the ejections being frequently bloody and purulent; great heat and irritation of the urinary organs, sometimes the most painful priapism; pulse quick and hard; and convulsions, tetanus, delirium, and syncope.

Morbid Appearances.—Inflammation and erosion of the stomach: if in substance, fragments of the flies, adhering to the mucous coat, or mixed with the contents of the stomach; marks of inflammation in the intestines and urinary organs: these are most evident when death does not soon follow the ingestion of the poison.

Tests.—The characteristic green, shining appearance of the fragments of the flies, and the character of the symptoms.

Treatment.—The promotion of vomiting by means of warm demulcents; copious dilution, bleeding, the warm bath, opiate frictions, enemata of mutton broth, laudanum, etc. Camphor, though not an antidote, alleviates some of the most distressing symptoms.

Carbolic Acid and other phenols, including creasote.

Symptoms.—Burning sensation, extending from the mouth to the stomach; severe pain in the stomach; vomiting of a frothy mucus; skin clammy and cold; breathing difficult; insensibility; pupils contracted; odor perceptible in the breath and vomited matter.

Morbid Appearances.—Mucous membrane of mouth whitened; œsophagus white, hardened; coats of stomach of a horny appearance; lungs gorged with blood.

Tests.—These compounds are readily recognized by their odor.

Treatment.—Saccharate of calcium appears to be the most reliable antidote; if not at hand, carbonate of calcium, or preferably calcined magnesia diffused in lime water, should be freely used; afterwards demulcents.

Carbonic Acid Gas. *See* Acid, Carbonic.

Chlorine.—An acrid gaseous poison.

Symptoms.—Great and painful constriction of the glottis, cough, sensation of suffocation, alternating with asphyxia; if the case is protracted, inflammation of the larynx and pneumonic inflammation; odor of the gas perceptible in the breath and in the vomited matters.

Morbid Appearances.—Marks of irritation and inflammation in all the parts with which the poison has come in contact.

Tests.—A solution of this gas has a yellowish color, and a strong, peculiar smell, which latter is evolved on boiling. It gives a white precipitate with nitrate of silver, which is insoluble in nitric acid.

Treatment.—The best remedy is a free use of albumen. Magnesia, with mucilaginous fluids, may also be freely exhibited. Inhalations of ammonia, ether, and the vapor of warm water, and even of sulphuretted hydrogen, have been recommended. The last article must be employed with great care, to avoid an excess of it.

Chrome.—The only form of this metal that requires notice is the

Bichromate of Potassium.—An acrid mineral poison.

Symptoms.—Burning heat in the mouth, throat, and stomach; excessive and painful vomiting of bloody mucus; convulsions, palsy, etc.

Morbid Appearances.—Softening and abrasion of the mucous coat of the stomach and intestines.

Tests.—In substance, by its orange-red color. In solution, by affording a rich red precipitate with nitrate of silver, a bright yellow with acetate of lead, a dingy green color and whitish turbidity with sulphuretted hydrogen.

Treatment.—The use of the carbonates of potassium or sodium, to neutralize the excess of chromic acid, followed by the administration of emetics. It would also be advisable to employ chalk or magnesia, in connection with milk or the albumen of eggs.

Cocculus Indicus. *See* Vegetable Poisons.

Colchicum Autumnale. *See* Vegetable Poisons.

CONIUM MACULATUM. *See* Vegetable Poisons.

COPPER.—This metal is not poisonous in a metallic state, but becomes highly so when oxidized or in combination.

The most common preparations of copper are the ACETATE (*verdigris*), SULPHATE (*blue vitriol*), the CARBONATE, and AMMONIURET.

Symptoms.—Violent headache, vomiting, pain in the bowels, cramps in the lower extremities, a peculiar and permanent coppery taste, diarrhœa, convulsions, palsy, and insensibility.

Morbid Appearances.—Marks of inflammation in the stomach and intestines. When the case has been protracted, there is often a green tinge of the lining membrane, and a jaundiced appearance of the skin.

Tests.—The Sulphate in a solid state presents a bright blue color, and leaves an astringent metallic impression on the tongue.

In solution: The transmission of sulphuretted hydrogen affords a brownish-black (*sulphuret of copper*) precipitate. Solution of ammonia precipitates a blue substance, which, on further addition of ammonia, becomes dissolved; but when only a small amount of the poison is present, no precipitation occurs, a clear violet-colored solution being then at once presented. Ferrocyanide of potassium throws down a reddish-brown (*ferrocyanide of copper*) precipitate. A piece of polished zinc or iron (as the blade of a table-knife) acquires a plating of copper, if placed in a liquid containing the above salt. The tests for sulphuric acid will indicate its presence here as the combining acid.

The Acetate: Same tests as preceding, excepting the last.

The Ammonio-sulphate: has a brilliant violet-blue color, and ammoniacal odor. Solution of arsenious acid affords a fresh apple-green precipitate; this experiment is, conversely, that for arsenious acid.

Treatment.—Vomiting to be promoted by copious daughts of warm water, milk, or mucilaginous fluids; various antidotes have been highly praised. Sugar was formerly recommended, but has not been as successful as was supposed. Albumen and milk form an insoluble compound with copper, provided they are in large excess. The protosulphuret of iron and iron filings have also been employed with advantage; but their action is too slow. The hydrated oxide of iron has been successfully administered where the arsenite of copper had been taken.

CORROSIVE SUBLIMATE. *See* Mercury.

DIGITALIS. *See* Vegetable Poisons.

IODINE.

Symptoms.—In large doses this substance causes heat and constriction of the fauces, nausea, offensive eructations, pain in the stomach, retching, colic, diarrhœa, quickness of the pulse, trembling, great thirst, salivation, convulsions, etc.

Morbid Appearances.—Distension and inflammation of the stomach and bowels; sphacelation in some places; and, in protracted cases, increased size and paleness of the liver.

Tests.—In the solid form, it is in purplish-black scales, having somewhat the odor of chlorine. When heated in a tube, it gives off violet fumes; when added to the mucilage of starch, it strikes a deep blue color. When it is mixed with other matters, pass a stream of sulphuretted hydrogen through the mixture, boil it, saturate with potassa, add mucilage of starch, filter, add nitric acid, and the color will indicate iodine.

Treatment.—Promote vomiting, resort to the free administration of amy-

laceous and mucilaginous fluids, and treat the inflammatory symptoms as they occur.

IODIDE OF POTASSIUM.

Symptoms.—Uneasiness of the stomach, followed by nausea, and a burning sensation in the stomach, vomiting, cephalalgia, vertigo, and tremors.

Morbid Appearances.—Stomach contracted; mucous membrane, with ecchymosed spots, and some abrasions; marks of inflammation in the intestines.

Tests.—Solid state: heat with the protoxide of manganese; moisten the powder with a mixture of equal parts of sulphuric acid and water; heat in a tube, and the purple vapor of iodine makes its appearance.

In solution: add to the filtered fluid an equal quantity of mucilage of starch, and a few drops of nitric acid, and the characteristic blue color will be produced. Test the urine in the same manner. It may also be detected in the solids of the body, by drying them, incinerating and lixiviating, filtering, and using starch and nitric acid.

Treatment.—The same as for iodine.

IRON.—Not poisonous in a metallic state; but some of its preparations act as irritants, especially the sulphate and the muriate.

Symptoms.—Nausea, vomiting, and purging; sensation of heat in the stomach and bowels; dejections of a black color, etc.

Morbid Appearances.—Softening of the mucous coat of the stomach and intestines; the whole extent of the alimentary canal of a black color; marks of inflammation.

Tests.—For the sulphate: ferrocyanide of potassium will give a greenish-blue precipitate, becoming a deep blue by exposure to the air; hydrosulphuret of ammonia will give a black precipitate; and gallic or tannic acid will give a bluish-black precipitate. The presence of sulphuric acid can be ascertained by means of nitrate of barium.

Treatment.—In poisoning by either salt, magnesia or the alkaline carbonates should be freely given.

LEAD.—In a metallic state, lead does not appear to be poisonous; but most of its compounds are, especially the acetate, chloride, carbonate, and oxide.

Symptoms.—Obstinate constipation, violent colic with retraction of the abdomen; vomiting, pulse small and hard, laborious breathing, and tremors, gums with a blue tinge, paralysis of the extremities, etc.

Morbid Appearances.—The appearances on dissection are very various, but are principally those of inflammation.

Tests.—In a solid state: Mixed with potassa and charcoal, and exposed to a red heat (or placed in a suitably sized hollow in a piece of charcoal, and exposed to a blow-pipe flame), metallic lead is formed.

In solution: Sulphuric acid, and the sulphates, throw down a white (*sulphate of lead*) precipitate. Solution of carbonate of sodium gives a white (*carbonate of lead*) deposit. Solution of chromate of potassium a rich yellow (*chromate of lead*) precipitate. Solution of iodide of potassium affords a yellow (*iodide of lead*) precipitate. Transmission of hydrosulphuric acid produces a blackish (*sulphuret of lead*) precipitate. Zinc precipitates lead from a solution of any of its salts.

To render the *carbonate* amenable to the foregoing tests, it must first be dissolved in a sufficiency of nitric acid diluted with distilled water.

Treatment.—Administer a solution of sulphate of zinc in full doses; induce and continue vomiting. If an insoluble salt of lead is the poison,

almond or olive oil must at first be given in considerable quantity. The free exhibition of the sulphate of sodium, or magnesium, or of milk, or albumen, to be followed by an emetic. In lead-colic, the treatment consists of active purgatives, followed by full doses of opium or Dover's powder. Inflammatory symptoms are counteracted by antiphlogistic means.

LOBELIA. *See* Vegetable Poisons.

MERCURY.—In a metallic state, mercury exercises but a slight influence on the body, but in a state of vapor it is capable of causing violent symptoms. All the salts of mercury are poisonous; but the most important is corrosive sublimate.

Symptoms.—The symptoms caused by corrosive sublimate resemble those produced by arsenic, but, from the salt being more soluble, they are more immediate and violent; there is a more marked taste, the evacuations are more frequently bloody, and there is a whitened condition of the epithelium of the mouth. There are three varieties of poisoning with mercury. In the first, the leading symptoms are, violent irritation of the alimentary tube; namely, vomiting, purging, pain at the pit of the stomach, and irritation in the throat; metallic, styptic taste, corrosion of the mouth, tongue, and palate; constriction of the throat, and difficulty of swallowing. Blood evacuated both by vomiting and by stools, suppression of urine, countenance flushed, tumid, and bloated. In the second variety, salivation and sloughing of the mouth succeed to the irritation and inflammation. In the third, mercurial erethism comes on, and is not preceded by the symptoms of local irritation. The first variety arises from the more soluble salts of mercury, in large doses; the second, from the same preparations, but in smaller doses and more diluted; the third, by the more insoluble and refractory compounds.

Morbid Appearances.—These are similar to those attendant on irritative or corrosive poisoning. There are, frequently, shrivelling of the tongue, and enlargement of its papillæ and root. In some cases, red and black spots in the cavities of the heart. Corrosion, ulceration, and disorganization of the mucous coat of the stomach and intestines. An inflamed condition of the urinary organs is also frequently observed.

Tests.—Corrosive sublimate in a solid state: Is sublimed when heated in a test-tube; and the acrimonious fumes speedily condense into a crystalline, semi-transparent mass. Placed in a test-tube, and lime water, potassa, or soda, added in solution, a yellow (*peroxide of mercury*) precipitate is thrown down.

In solution: Ammonia throws down a white (*ammonio-chloride of mercury*) precipitate. Solution of proto-chloride of tin affords a (*calomel*) precipitate, which, at first, is white, but acquires a leaden color on adding more of the test; when this precipitate (after being well agitated) is dried, minute globules of quicksilver are formed. Transmission of sulphuretted hydrogen produces a (*sulphuret of mercury*) precipitate, which at first is leaden-colored, then black. Solution of iodide of potassium affords an intensely brilliant scarlet (*biniodide of mercury*) precipitate, which dissolves in an excess of the test. Corrosive sublimate may be reduced to the metallic state through galvanic influence, applied as follows: A drop of the suspected fluid being laid on a piece of polished gold, and both it and the gold touched at the same instant by a point of iron (as a thick needle, or the end of a penknife), a small silvery coating of mercury soon becomes apparent on the gold. Being freely soluble in sulphuric ether, addition of this fluid is of much service when the poison is found mingled with organic or other matters.

The Cyanide: When heated in a tube, cyanogen gas is evolved, which, when inflamed at the mouth, burns with a rose-red flame, with a blue halo.

Calomel: Is sublimed by heat. When treated with potassa, or lime water, it assumes a black appearance, mercurous oxide being separated.

The Biniodide: On cautious application of heat, it sublimes in red-colored crystals, which soon change to yellow, and subsequently to a dusky hue. On exposure to a sufficient degree of heat, iodine fumes are disengaged. When mixed with potassa (equal weights) and heated in a test-tube, decomposition occurs; metallic mercury being sublimed, and iodide of potassium deposited in the tube.

Red Precipitate: Exposed to heat in a test-tube, metallic mercury is sublimed; evolution of oxygen being at the same time demonstrable.

The Persulphate: Treated in the same manner as the foregoing, sublimation of the mercury takes place; and sulphurous acid gas is perceptibly evolved.

Treatment.—If vomiting does not already exist, it must be produced by the exhibition of emetics. Various antidotes have been suggested for this poison. The best appears to be albumen of eggs in continuous large doses, and infusion of catechu afterwards; sweet milk; mixtures of flour with water (for the sake of the gluten) in successive cupfuls; iron filings; emetics of tartrate of antimony and potassium have been recommended, to combat ptyalism, when present; but to check excessive salivation, small doses of the chlorate of potassium appear to be the most successful.

The hydrated proto-sulphuret of iron has been proposed by Mialhe, and confirmed by Orfila, who says, if it be taken immediately after the ingestion of the corrosive sublimate, it destroys completely the poisonous properties of the latter.

MORPHIA. *See* Vegetable Poisons. Opium.

NUX VOMICA. *See* Vegetable Poisons.

OPIUM. *See* Vegetable Poisons.

PHOSPHORUS.—A corrosive poison.

Symptoms are protracted in their appearance. A hot alliaceous taste in the mouth; acrid burning sensation in the throat and stomach; nausea and vomiting. The vomited matters are of a dark color, and emit white fumes; pulse small and frequent; sometimes violent convulsions.

Morbid Appearances.—A general inflammatory appearance of the stomach and intestines, with sphacelated spots in various parts.

Tests.—The peculiarity of its odor; its highly inflammable property, when only moderately heated, and, when rubbed on the skin, its property of rendering the latter luminous in the dark.

Treatment.—Mixture of magnesia and cold water, in repeated draughts. Promote continuous vomiting by tickling applications of a feather to the fauces. The exhibition of oil is injurious, as it tends to dissolve the phosphorus.

STRYCHNIA. *See* Narcotico-irritants, under the head of Vegetable Poisons.

TIN.—This is not poisonous in a metallic state; but some of its salts, as the chlorides, are violent irritants.

Symptoms.—An austere metallic taste; constriction of the throat, impeded respiration, violent vomiting, cramp of the stomach and violent colic, purging, pulse small and quick, convulsions, sometimes paralysis, asphyxia.

Morbid Appearances.—Inflammation and erosion of the stomach and intestines.

Tests.—Chloride of gold gives a deep purple-brown, almost black precipitate. Nitrate of silver affords a white precipitate, insoluble in nitric acid. Sulphuretted hydrogen throws down a deep chocolate-brown precipitate, even in diluted solutions.

Treatment.—Copious draughts of milk; then excite vomiting. Inflammatory symptoms to be combated by antiphlogistics, and nervous irritation by opiates and antispasmodics.

VEGETABLE POISONS.—These are very numerous, and possessed of the most different qualities; some being mere irritants, others narcotic irritants —whilst another class are pure narcotics.

IRRITANTS.—This includes a great number of vegetable substances, the principal of which are ALOES, ARUM, CAPSICUM, COLOCYNTH, CREASOTE, CROTON SEEDS, ELATERIUM, EUPHORBIUM, GAMBOGE, JALAP, MEZEREON, CASTOR SEEDS, SAVIN, SCAMMONY, etc.

Symptoms.—Many of these articles act especially on the bowels, and in moderate doses are efficaciously used as purgatives. In large doses, they cause hypercatharsis, and much irritation of the stomach and bowels.

Morbid Appearances.—These are various degrees of inflammation of the stomach and bowels.

Tests.—None by means of reagents. The rich yellow color of *gamboge* may sometimes prove a means of its detection; and familiar acquaintance with others of the above substances may lead to their recognition by smell, taste, etc.

Treatment.—The expulsion of the poison by means of emetics, and, when this is effected, copious demulcent drinks in a warm state; succeeded by liquid cordial, stimulant, or opiate medicines suited to particular circumstances.

NARCOTICS.—This is a small class of the vegetable poisons, the most important of which are OPIUM, HYDROCYANIC ACID (see page 689), and HYOSCYAMUS.

OPIUM.

Symptoms.—A dark, suffused countenance, drowsiness, stupor, perfect insensibility, followed by delirium or profound coma; then a pallid countenance, deep and stertorous breathing, cold sweats, slow and full pulse, cold and livid skin, suspension of all the secretions except perspiration; at length, the pulse becomes frequent, feeble, and thread-like; and, sometimes, convulsions, particularly in children.

Morbid Appearances.—Occasionally redness of the stomach and intestines, fluidity of the blood, engorgement of the lungs; but the only post-mortem appearance that appears to occur in all cases is turgescence of the vessels of the brain, sometimes with effusion of water on its surface or into the ventricles. But this condition of the brain does not furnish of itself any evidence of poisoning by opium, as it is frequently found to arise from a variety of other causes.

Tests.—Opium in substance: its peculiar taste, color, and odor (especially the latter quality when arising from opium in a softened or moist state, and more so if it be moderately heated; as when just obtained from the stomach).

In solution: Tincture of the chloride of iron produces a (*meconite of iron*) red coloration, which is not changed on the addition of solution of corrosive

sublimate, but is discharged by hydrochloric acid. Tannic acid yields a white (*tannate of morphia*) precipitate.

When the suspected fluid has been procured from the stomach, it usually contains a mixture of organic substances; these must be broken down, and the whole rendered sufficiently fluid by the addition of distilled water *when necessary*, and then be slightly acidulated with acetic acid. The liquor thus obtained, when well agitated, and filtered, must be evaporated to consistence of syrup. And, after being digested with alcohol, it must be boiled, and again concentrated to nearly the consistence of syrup. When this alcoholic extract (as it has been called) is dissolved in distilled water, the solution of ammonia, cautiously added, produces a precipitate of morphia, which acquires a deep-red color changing to yellow, when nitric acid is dropped into it, and a blue color on the addition of tincture of chloride of iron. When the last named precipitate is removed by filtration, and acetate of lead added to the supernatant (*meconate of ammonium*) liquor, a (*meconate of lead*) deposit is afforded; which, when suspended in water, is decomposed by the transmission of sulphuretted hydrogen; a dark precipitate being thereby thrown down. The fluid remaining from this last process acquires a deep cherry-red hue on the addition of the tincture of chloride of iron.

Morphia in the solid state: Is only slightly soluble in water. Nitric acid turns it first to an orange, and then to a deep orange-red color. Chloride of iron gives a blue color, which is destroyed by acids. Iodic acid is decomposed by morphia, and iodine is set free. To show this, the acid is to be mixed with starch; on the addition of morphia the iodine combines with the starch, which becomes of a blue color, if the quantity be large, or of a reddish or purplish tint, if it be small.

Treatment.—The stomach to be evacuated by means of the stomach-pump, as speedily as possible. This is to be pursued until the water used no longer has the smell or taste of opium. When a stomach-pump cannot be procured, or if the patient shall have swallowed solid opium, emetics of sulphate of zinc should be administered, until the stomach is freed; strong decoctions of tea or coffee, or other vegetable astringents, are found useful in the intervals. Cold affusions on the head, chest, and spine have been used with great success, and the subcutaneous injection of atropia has been recommended. Flagellation and other means of arousing the patient from a state of lethargy must also be employed. Bleeding should not be resorted to until all the poison has been eliminated, as the abstraction of blood tends to promote absorption, and, even then, with much caution. The administration of vinegar is also objectionable. The best liquid that can be given is a strong decoction of coffee. The various antidotes that have been recommended are useless.

The evidence, in favor of the successful employment of artificial respiration in cases that were apparently desperate, has become so strong and unquestionable, that no practitioner is justifiable in abandoning his case until this measure has been faithfully tried. Active stimulation is often required.

HYOSCYAMUS.

Symptoms.—Sickness, stupor, dimness of sight, and delirium, followed by coma and much dilatation of the pupils; pulse at first hard, but becoming weak and tremulous; petechiæ often making their appearance before death.

Morbid Appearances.—Inflammation of the stomach, bowels, and brain.

Tests.—There are no tests that can be relied upon, except a recognition of the plant, and the nature of the symptoms.

Treatment.—The speedy evacuation of the poison, by means of emetics and purgatives, and the subsequent use of acidulous drinks.

The propriety of the latter recommendation has been doubted, notwith-

standing the high European authority in its favor, because the use of acidulous drinks will result in the formation of soluble salts with the remnants of the hyoscyamia that may be in the stomach; thereby adding to the danger. The free use of vegetable astringents in solution has been suggested instead.

NARCOTICO-IRRITANTS.—These are very closely allied in their effects to the last class, but have a more direct action on the spinal marrow and nerves, as shown by the more frequent occurrence of convulsions and paralysis. They differ much from each other in their action on the system; most of them, however, owing their properties to the presence of an alkaloidal principle. The most important are: DIGITALIS, VERATRUM, CONIUM, COLCHICUM, LOBELIA, ACONITUM, BELLADONNA, STRAMONIUM, TABACUM, NUX VOMICA, etc.

Symptoms.—These are various, but, in general, vertigo, coma, delirium, paralysis, or convulsions, with disturbance and pain in the stomach and intestines, are observed. Those belonging to the nux vomica tribe have marked effects on the spinal marrow, causing tetanus and convulsions, but seldom coma or delirium; whilst, on the other hand, squill and foxglove produce symptoms of narcotism, preceded by vomiting, and other signs of irritant action on the stomach.

Morbid Appearances.—These, like the symptoms, are very various. In some cases, there is inflammation of the stomach and intestines; in others, this is wholly wanting. Where there have been symptoms of cerebral disturbance, traces of congestion of the brain are usually discernible, but are not found in every case.

Tests.—Most of these poisons, as before said, owe their deleterious powers to the presence of an alkaloidal principle, which is exceedingly difficult to detect by chemical tests; hence the strongest evidence is to be derived from an inspection of the fragments of the plant itself, if it has been administered in substance; but this mode of discrimination fails where the poison has been taken in the form of extract, infusion, or decoction. In such cases, the only reliance is on the symptoms and concomitant circumstances.

Conia, the active principle of conium, when liberated from its combinations by potassa, is volatile, and exhales a strong mouse-like or urinous odor. With the vapor of muriatic acid, it forms dense white fumes. The odor of conia is so characteristic, that it can scarcely be confounded with any other poisonous agent.

Veratria affords a reddish-yellow solution with nitric acid, an intensely-red one with concentrated sulphuric acid, and a white precipitate with tannic acid. When applied to the nose, it causes severe sneezing.

Brucia (found in the seeds of the nux vomica) is colored red by nitric acid, and this color changes to violet by the addition of protochloride of tin. With chlorine it gives a red color. Sulphuric acid first reddens brucia, and then turns it yellow and green.

Pure strychnia (also found in the nux vomica) may be recognized by rubbing a small portion with a few drops of sulphuric acid, containing one-hundredth of its weight of nitric acid. No change ensues; but the addition of a very small quantity of the peroxide of lead, or of bichromate of potassium, changes the solution to a blue color, then to a red, and in the course of a few hours to a yellow color. Commercial strychnia sometimes affords a red color, changing to a yellow, with nitric acid, owing to the presence of brucia.

Treatment.—This consists in the prompt use of emetics, or the stomach-pump, followed by the administration of purgatives. No general antidote can be relied upon; but, as tannic acid precipitates these alkaloids, the free use of decoctions or infusions containing it may be resorted to with advan-

tage; or animal charcoal may be freely administered for its absorbent qualities.

In poisoning by nux vomica and strychnia, the inhalation of chloroform will in a measure control the spasms; aconite and chloral have been recommended as antidotes, and the subcutaneous injection of Calabar bean has been found advantageous.

Zinc.—This has no poisonous properties in a metallic state, but several of its salts possess active powers. Of these, the sulphate or white vitriol is the most common, and therefore the most likely to occasion unpleasant consequences.

Symptoms.—Pain in the abdomen, violent vomiting and diarrhœa, quick pulse, paleness and contraction of the features, coldness of the extremities. There is always a very austere taste in the mouth.

Morbid Appearances.—Marks of imflammation in the stomach and intestines.

Tests.—Ammonia gives a white precipitate, soluble in an excess of the alkali. Chromate of potassium affords an orange-red deposit, the chromate of zinc.

Treatment.—The free exhibition of warm water with milk, albumen, magnesia, etc. Infusions containing tannic acid. Where the poison has entered the bowels, emollient clysters are to be given.

The following table, from Taylor "On Poisons," gives a succinct view of the most approved antidotes for the several poisons noticed in the foregoing pages:—

Non-Metallic Poisons.

Poisons.		*Antidotes.*
Mineral Acids.	Sulphuric, Nitric, Muriatic, Nitro-Muriatic,	Magnesia mixed with water or milk; carbonate of calcium; compound chalk powder; soda, potassa; the fixed oils.
Vegetable Acids.	Oxalic, Tartaric,	Carbonate of calcium. (Chalk or whiting.)
Salts.	Binoxalate of potassium,	Carbonate of calcium. Sulphate of calcium, and water.
	Bitartrate of potassium,	Carbonate of sodium in solution.
Alkalies.	Potassa, soda, ammonia, and their carbonates,	Vinegar, lemon juice, citric acid, oil.
Salts.	Baryta and its soluble salts,	Sulphate of sodium, potassium, magnesium or calcium.
	Carbonate of barium,	Mixture of sulphate of magnesium and vinegar.
	Alum,	Carbonate of sodium or ammonium.

Metallic Poisons.

Arsenic and soluble arsenites.	Hydrated per-oxide of iron; hydrated magnesia.
	Mixture of oil and lime water.
Corrosive sublimate and salts of mercury.	Albumen, gluten, or flour diffused in water; milk.

Poisons.	*Antidotes.*
Soluble salts of lead.	The alkaline, or soluble earthy sulphates.
Carbonate of lead.	Sulphate of magnesium and vinegar.
Soluble salts of copper.	Albumen, gluten, flour diffused in water; milk.
Tartar emetic.	Decoctions and tinctures containing tannic acid. Magnesia.
Chloride of antimony.	Carbonate of sodium; magnesia.
Salts of tin.	Milk; carbonate of sodium; magnesia.
Sulphate or acetate of zinc.	Milk; carbonate of sodium; magnesia.
Sulphate of iron.	Carbonate of sodium or ammonium.
Nitrate of silver.	Chloride of sodium.

NARCOTIC POISONS.

Opium; hyoscyamus.	Emetics; stomach pump; cold affusion. Strong decoction of coffee; electro-magnetism; tannic acid.
Prussic acid.	Ammonia; chlorine; cold affusion.

MODES OF DISTINGUISHING SOME OF THE VEGETABLE ALKALOIDS, WHEN IN POWDER.

Treat the powder with nitric acid; this is colored red by *Brucia*, *Delphia*, *Morphia*, and by the *Strychnia* of commerce, but not the pure. If the reddened acid becomes violet on the addition of protochloride of tin, it is *Brucia;* if it becomes black and carbonaceous, it is *Delphia*. If the powder is fusible without decomposition, and decomposes iodic acid, it is *Morphia;* if it is not fusible without decomposition, and does not decompose iodic acid, it is *Strychnia*. If the powder strikes a green with nitric acid, it is *Solania;* if insoluble in ether, and does not redden nitric acid, it is *Emetia;* if soluble in ether, does not redden nitric acid, but melts and volatilizes with heat, it is *Atropia;* if thus affected by ether or nitric acid, but does not volatilize, it is *Veratria*.

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pills, 491. Rhubarb and ox gall, 492. Senna, 531. Compound solution sulphate of sodium, 548. Rochelle salt, 464. Compound powder sulphur, 562. Clyster turpentine, 571.

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DIARRHŒA. Gallic acid, 93. Tannic acid, 100. Acetate aluminum, 115. Alum, 116. Angustura, 137. Mixture chamomile, 139. Antimonial wine and laudanum, 145. Arnica, 149. Dewees's carminative, 156. Subnitrate bismuth, 175. Tannate bismuth, 176. Clyster bistort, 177. Compound powder chalk, 183. Lozenges chalk, 184. Chalk mixture, 184. Columbo, 191–192. Camphor water and laudanum, 192. Camphor water and nitric acid, 193. Compound cascarilla powder, 209. Catechu, 212. Chlorine clyster, 222. Peruvian bark and rhatany, 229. Electuary Peruvian bark, 230. Infusion columbo and ginger, 190. Columbo and cascarilla, 191. Creasote mixture, 252. Sulphate copper, 260. Electuary sulphate copper, 261. Wine persimmons, 268. Infusion black purslane, 276. Mixture ammoniated iron, 280. Persesquinitrate iron, 292. Compound infusion galls, 305. Syrup galls, 305. Geranium, 310. Compound powder of avens, 312. Decoction pomegranate rind, 316. Infusion logwood, 320. Electuary logwood, 320. Compound powder kino, 363. Electuary kino, 364. Compound powder rhatany, 364. Syrup sweet gum bark, 376. Monesia, 397. Injection acetate morphia, 398. Opium and chalk, 419. Roasted opium, 419. Plaster opium and camphor, 422. Mixture wine of opium, 426. Sedative mixture, 426, 433. Bolus allspice, 438. Acetate lead, 444. Acetate lead mixture, 445. Decoction oak bark, 481. Confection acorns, 481. Roasted rhubarb, 491. Rhubarb mixture, 495. Confection dog rose, 497. Electuary roses, 498. Decoction blackberry root, 501. Infusion benne, 536. Hardhack, 552. Compound turpentine plaster, 572. Tormentil, 573. Infusion slippery elm, 576. Mixture of

gum Arabic, 84. Subnitrate of bismuth, 175. Columbo and salep, 191. Sweet fern, 294. Oil of ergot, 273. Tincture of gentian, 310. Avens, 311. Barley, 324. Magnesia and rhubarb, 380. Marsh rosemary, 554.

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DYSMENORRHŒA. Infusion southernwood, 151. Camphor mixture, 193. Compound pills ergot, 273. Clyster iodine, 353.

Dyspepsia. Wormwood, 83. Aloes pills, 108. Anise, 137. Extract chamomile, 139. Compound chamomile pills, 139. Orange-peel and rhubarb, 157. Compound orange elixir, 159. Bismuth, 175. Calamus, 182. Cayenne pepper pills, 202. Infusion cinnamon, 234. Powder coriander, 250. Pill prepared metallic iron, 278. Mixture malate iron, 292. Nitrate iron, 292. Mixture soot, 301. Infusion gentian and rhubarb, 309. Mixture gentian and sulphuric acid, 310. Masterwort, 323. Infusion hops, 325. Mercury, chalk, and ipecacuanha, 327. Bolus ipecacuanha, 355. Ipecacuanha and centaury, 356. Rice jelly, 430. Solution hydrargyro-iodide potass., 463. Pancreatin, 431. Pepsin, 434, 597. Sulphate potassium and rhubarb, 474. Rhubarb, 490. Soda and rhubarb, 544. Mixture carbonate sodium and quassia, 544. Compound turpentine plaster, 572. Oxide zinc and columbo, 589. Alkaline tincture of wormwood, 83. Lactic acid, 95. Alkaline wine of aloes, 112. Chamomile pills, 139. Subnitrate of bismuth, 175. Calamus, 182. Antacid mixture, 186. Aromatic powder, 206. Wine of tartrate of iron, 287. Magnesia and orange-peel, 379.

Dyspnœa. Opium and castor, 421.

Dysuria. Benzoic acid and copaiba, 89. Tartar emetic and phosphate calcium, 143. Infusion fleabane, 274. Mixture lycopodium, 378. Pills nitrate potassium, 471. Crowfoot, 489. Mixture tobacco, 567.

Ear, Affections of. Pyroligneous acid, 88. Acoustic balsam, 164. Injection morphia, 308. Anti-otitic mixture, 423. Opium liniment, 422.

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Epistaxis. Alum, 116. Sulphate copper styptic, 261. Injection sulphate iron, 298.

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FEVER. Vinegar mixture, 85. Syrup vinegar, 86. Citric acid, 92. Effervescing powders, 92, 102. Tartaric acid, 101. Sweet spirit of nitre, 552. Acetate ammonium, 124. Citrate ammonium, 128. Nitrate ammonium, 129. Tartar emetic, 142. Mixture extract centaury, 215. Boneset, 275. Compound powder ammoniated iron, 280. Mixture avens, 312. Calomel and jalap, 334. Calomel and nitrate potassium, 335. Dover's powder, 354. Ipecacuanha and tragacanth, 355. Infusion malt, 384. Citrate potassium, 462. Nitrate potassium, 471. Nitrous powders, 471. Mixture nitrate potassium, 472. Mixture sulphate potassium, 473. Raspberry vinegar, 502. Infusion of sage, 508. Tamarinds, 567.

FEVER, HECTIC. Compound infusion boneset, 275. Gœlis's powder, 405. Compound powder sulphate quinia, 485. Compound infusion sage, 508.

FEVER, INTERMITTENT. Pills arsenic and opium, 89. Lockstadt's pills, 134. Golden sulphuret antimony, 141. Tartar emetic and quinia, 143. Electuary orange-peel, 157. Bebeerina, 169. Camphor water and ether, 194. Cetrarin, 219. Preparations Peruvian bark, 228. Cinchonia, 233. Decoction coffee, 237. Dogwood, 251. Pills sulphate copper, 260. Sulphate copper and opium, 260. Persimmon, 268. Eucalyptus, 275. Compound powder Prussian blue, 288. Gelsemium, 307. Mixture of avens, 312. Horsechestnut, 323. Tulip-tree bark, 376. Magnolia, 384. Narcotina, 407. Phloridzin, 436. Phosphorated oil turpentine, 437. Piperina, 440. Mixture acetate potassium, 454. Arsenical solution, 88. Arseniate potassium, 454. Mixture citrate potassium and bark, 462. Oxalate potassium, 472. Quassia, 480. Oak bark, 481. Quinia and salts, 482. Salicin, 507. Willow bark, 507. Virginia snakeroot, 535. Common salt and lemon juice, 546. Arseniate sodium, 540. Solution chlorinated soda, 539.

FEVER, TYPHUS. Sulphurous acid, 100. Carbonate ammonium, 126. Powder of oxide of gold, 162. Wild indigo, 167. Clyster camphor, 194. Liniment cantharides, 199. Tincture cayenne pepper, 203. Yeast mixture, 277. Musk mixture, 403. Turpentine mixture, 572. Laudanum and tartar emetic, 429. Egg and brandy mixture, 431. Egg and wine mixture, 431. Mixture Virginia snakeroot and allspice, 536. Wine Virginia snakeroot and vanilla, 536. Tincture Virginia snakeroot and balsam Peru, 536. Mustard whey, 537. Chlorinated soda, 539.

FISSURES, ANUS. Ointment acetate lead, 447.

FISTULÆ. Injections copaiba, 248. Injection corrosive sublimate, 334. Injection myrrh, 406. Injection iodide potass., 466. Injection iodine, 469. Compound lotion iodide potass., 469.

FLATULENCE. Ammoniated alcohol, 124. Tincture angelica, 136. Anise, 137. Chamomile pills, 139. Tincture assafetida and soot, 156. Assafetida plaster, 156. Elixir orange-peel, 158. Tincture benzoin, 174. Calamus, 182. Aromatic powder and confection, 206. Compound tincture cardamom, 206. Spirit caraway, 207. Preparations cloves, 208. Cinnamon, 234. Coriander, 250. Elixir de Garus, 254. Oil of dittany,

257. Infusion of fennel, 300. Oil of partridge-berry, 307. Pennyroyal, 321. Henbane and ipecacuanha, 347. Lavender, 371. Magnesia and camphor, 351. Peppermint, 393. Nutmeg, 404. Confection opium, 421. Water allspice, 439. Electuary black pepper, 439. Compound tincture sassafras, 520. Purgative pastilles, 522. Soda mint, 542. Mixture carbonate sodium and gentian, 544. Golden rod, 550. Compound turpentine plaster, 572. Ginger, 593.

FŒTOR ORIS. Mixture nitric acid, 97. Alum, 116. Lozenges chloride of lime, 188. Charcoal lozenges, 205. Lozenges catechu, 213. Pastilles catechu, 213. Creasote, 252.

FROST, EFFCTS OF. Muriatic acid lotion, 96. Sulphuric acid liniment, 100. Rust's ointment, 119. Oil elaterium, 270. Compound ointment henbane, 348. Embrocation petroleum, 435. Ointment tannic acid, 101.

FUNGOUS FLESH. Burnt alum, 116. Chloride antimony, 139. Lotion orpiment, 151. Verdigris and savine, 258. Verdigris ointment, 258.

GANGLIONIC SYSTEM, DISEASES OF. Cataplasm of bryony, 179. Prussian blue, 288.

GANGRENE. Lotion of bromine, 178. Compound camphor pills, 192. Peruvian bark and arnica, 226. Cataplasm Peruvian bark, 231. Musk pills, 402. Anodyne ointment, 423. Cataplasm oak bark, 481.

GASTRALGIA. Mixture aconite, 104. Subnitrate bismuth, 175. Syrup codeia, 237.

GASTRODYNIA. Oxide silver, 148. Compound bismuth powder, 175. Compound tincture cinnamon, 235. Oil of ergot, 273. Mercurial mixture, 329.

GLANDS, ENLARGED. Plaster ammoniac with mercury, 121. Bromide ammonium, 125. Cataplasm bryony, 179. Ointment chloride lime, 188. Animal charcoal, 205. Ointment of iodide of carbon, 206. Hemlock and dandelion, 244. Plaster foxglove, 267. Ointment iodide iron, 291. Compound galbanum plaster, 304. Compound mercurial liniment, 330. Ointment iodide mercury, 340. Red sulphuret mercury, 345. Liniment henbane, 348. Ethereal tincture iodine, 351. Mixture iodine and iodide potassium, 352. Ointment iodoform, 354. Sulphuret potassium, 474. Compound plaster sulphuret potassium, 477. Bin-iodide of quinia, 483. Burnt sponge, 553.

GLEET. Tannic acid, 100. Tincture cantharides and guaiacum, 198. Cubebs and ergot, 255. Compound powder ergot, 273. Pills guaiacum and turpentine, 318. Injection chloride zinc, 586.

GLOTTIS, SPASM OF. Cataplasm tobacco, 567.

GOITRE. Solution chloride calcium, 184. Animal charcoal, 203. Iodine ointment, 353. Cataplasm iodine, 353. Iodide potass., 465. Ointment iodide potass., 467. Liniment iodide potass., 467. Sulphuret potass., 474. Burnt sponge, 553.

GONORRHŒA. Injection of hydrocyanic acid, 94. Pills of tannic acid, 100. Alumina, 115. Alum, 116. Nitrate of silver, 146. Assafetida and opium, 154. Oil box, 180. Pills chloride calcium, 185. Emulsion hemp, 196. Compound bolus catechu, 213. Electuary catechu, 213. Wine Peruvian bark and calamus, 232. Copaiba and its preparations, 247. Cubebs, 254. Injection ammoniated copper, 259. Injection sulphate copper, 261. Compound powder ammoniated iron, 280. Injection iodide iron, 291. Pills sulphate iron, 297. Tincture galls, 305. Oil guaiacum, 317. Mixture of Indian sarsaparilla, 323. Injection corrosive sublimate, 334. Calomel and catechu, 336. Saturated tincture iodine, 351. Injection opium, 424.

Sedative injection, 433. Oil parsley, 436. Injection of chloro-platinate of sodium, 444. Acetate lead mixture, 445. Injection sulphuret potass., 476. Injection caustic potassa, 452. Chlorate potassium, 462. Pills nitrate potassium and camphor, 471. Nitrated emulsion, 472. Starkey's soap, 415, 513. Oil sandalwood, 511. Turpentine and rhubarb, 571. Turpentine mixture, 572. Injection acetate zinc, 586. Fomentation sulphate zinc, 591. Injection sulphate zinc, 592. Sulpho-carbolate zinc, 592.

GOUT. Aconite, 102. Ammoniacal liniment, 122. Carbonate ammonium, 126. Phosphate ammonium, 129. Ammonium succinate, 130. Golden sulphuret antimony, 141. Sulphuret calcium, 181. Camphorated ether, 194. Portland powder, 215. Pills pipsissewa, 221. Colchicum, 238. Wine hedge hyssop, 317. Pills guaiacum and sulphur, 318. Ammoniacal tincture guaiacum, 319. Magnesia and colchicum, 381. Confection opium, 421. Phosphorated oil, 436. Mixture caustic potassa, 452. Solution silicate potassium, 473. Warner's cordial, 494. Extract elder berries, 509. Pills soap and ox gall, 515. Conserve broom, 528. Compound tincture senna, 532. Liniment sulphuret carbon, 565. Turpentine mixture, 572. Veratria, 580. Wine white hellebore, 582.

GRAVEL. Mixture Prussian blue, 280. Carbonate potassium and ammonium, 463.

GUMS, AFFECTIONS OF. Boracic acid, 89. Alumina, 115. Electuary alum, 117. Gargle alum, 115. Collutory catechu, 214. Collutory creasote, 253. Gargle sulphate zinc, 591.

HAIR, LOSS OF, etc. Garlic, 107. Almond cream, 133. Macassar oil, 134. Fixature, 135, 262, 413. Hair dye, 147. Compound ointment balsam Peru, 165. Compound tincture cantharides, 198. Pomatum cantharides, 201. Shampoo liquid, 202. Pomatum Peruvian bark, 231. Lotion galls, 305. Ointment of lavender, 372. Bay rum, 404.

HAIR, TO REMOVE. Orpiment powder, 151. Various depilatories, 602.

HEART, AFFECTIONS OF. Syrup asparagus, 153. Bromine, 178. Foxglove and acetate lead, 266. Digitalin, 267. Mixture iodide potass., 466.

HEMATEMESIS. Calomel and acetate of lead, 335. Pills acetate lead, 444.

HEMICRANIA. Pills of valerianate of quinia, 489. Compound powder valerian, 577. Electuary valerian, 578.

HEMIPLEGIA. Pills poison oak, 574.

HEMOPTYSIS. Gallic acid mixture, 93. Inhalation tannic acid, 101. Powder starch, 135. Carrageen mixture, 225. Electuary Peruvian bark and catechu, 230. Creasote mixture, 252, 253. Bolus foxglove, 264. Mixture tincture foxglove, 266. Bugle weed, 379. Sedative mixture, 426. Compound pills acetate lead, 444. Tolu mixture, 167. Mixture uva ursi, 577.

HEMORRHAGES. Gallic acid, 92. Sulphuric acid, 99. Alum, 116. Alum whey, 118. Bistort, 177. Alum and catechu, 213. Extract of Peruvian bark, 228. Sulphate copper, 260. Compound powder ergot, 273. Extract ergot, 273. Oil erigeron, 274. Chloride iron and acetate lead, 283. Tincture chloride iron, 284. Solution sulphate iron, 298. Compound powder galls, 304. Avens, 311. Compound powder kino, 363. Mixture rhatany, 365. Alum whey, 366. Matico, 390. Roasted opium, 418. Opium and acetate lead, 420. Compound pills acetate lead, 444. Acetate lead, 444. Mixture bistort, 177. Hæmostatic powder, 489. Powder sulphate sodium and opium, 548. Mixture uva ursi, 577. Eau de Pagliari, 596.

HEMORRHOIDS. Aloetic mixture, 112. Alum ointment, 119. Lime ointment, 186. Charcoal suppository, 205. Extract Peruvian bark, 228. Hemlock oil, 245. Suppository hemlock, 246. Saffron ointment, 254.

Oil elaterium, 270. Ointment galls, 306. Compound gall ointment, 305. Witch hazel, 371. Ointment mercury and belladonna, 350. Ointment red oxide mercury and tin, 343. Suppositories iodoform, 354. Ointment henbane, 348. Electuary jalap, 360. Ointment matico, 390. Injection morphia, 398. Anodyne ointment, 423. Ointment opium and tar, 423. Laudanum ointment, 423. Confection black pepper, 439. Ward's paste, 439. Pile ointment, 446. Lead ointment, 448. Mixture tartrate potassium, 477. Mixture bitartrate potassium, 456. Ointment figwort, 528. Electuary senna and sulphur, 532. Ointment tin, 553. Ointment stramonium, 556. Sulphur electuary, 562. Fomentation sulphate zinc, 591. Tannin, 100.

Hepatitis. Mixture nitric acid, 97. Bath nitromuriatic acid, 98. Compound mercurial pill, 328. Chlorate potassium, 461. Dandelion, 569.

Hernia. Clyster belladonna, 172. Infusion tobacco, 567.

Herpes. Carbolic acid, 90. Chlorine liniment, 223. Arseniate iron, 280. Ointment carburet iron, 283. Decoction soot, 301. Ointment black hellebore, 322. Liniment acetate mercury, 331. Compound calomel pill, 336. Calomel ointment, 337. Ointment red oxide mercury and lead, 343. Ointment sulphate mercury, 344. Red sulphuret mercury, 345. Ointment red sulphuret mercury, 345. Lotion sulphuret potassium, 475.

Hiccough. Ammoniated alcohol, 124. Assafetida, 153. Carminative mixture, 394.

Hooping-cough. Anisated ammonia, 124. Bromide ammonium, 125. Succinated ammonia, 129. Extract anemone, 136. Kermes mineral, 141. Antimonial wine and bittersweet, 175. Assafetida pills and mixture, 154. Assafetida and tolu, 155. Assafetida plaster, 156. Belladonna, 170. Fumigating powder, 173. Emulsion cantharides, 197. Tincture bark and cantharides, 201. Chestnut leaves, 210. Syrup Peruvian bark, 232. Cochineal and carbonate potass., 236. Syrup codeia, 237. Confection ipecacuanha, 356. Mixture ipecacuanha, 357. Compound syrup ipecacuanha, 357. Alkaline wine ipecacuanha, 358. Syrup sulphuret magnesium, 384. Myrrh and zinc, 405. Lettsom's elixir, 428. Mixture carbonate potassium, 460. Compound syrup squill, 524. Carbonate sodium and ipecacuanha, 544. Tincture artificial musk, 560. Liniment oil of amber, 561. Compound powder tobacco, 566. Mixture balsam tolu and copaiba, 167. Sulphate zinc, 590. Mixture sulphate zinc, 592. Oxide of zinc, 589. Ammoniated alcohol, 124. Syrup of codeia, 237. Hemlock plaster, 245. Copaiba mixture, 248. Pills of henbane, 347. Mixture of henbane and antimony, 347. Powder ipecacuanha and carbonate of sodium, 355. Powder of musk, 402. Musk mixture, 403.

Hydrophobia. Extract hemp, 196. Tonquin powder, 402.

Hydrocephalus. Powder foxglove, 264. Calomel and foxglove, 334. Ointment iodide potass. and mercury, 467.

Hydrothorax. Tincture colchicum and foxglove, 241. Colchicum and elaterium, 241. Mixture colocynth, 243. Pills foxglove, 265. Mixture elaterium, 270. Gamboge mixture, 306. Extract lettuce, 368. Mixture tobacco, 567.

Hypochondria. Acetic ether, 105. Aloes, 110. Assafetida, 153. Mixture lettuce and dandelion, 368.

Hypopion. Pills seneka, 529.

Hysteria. Mixture acetic ether, 105. Whytt's pills, 110. Carbonate ammonium, 126. Succinate ammonium, 129. Valerianate ammonium, 131, 597. Mixture chamomile, 139. Infusion southernwood, 151. Assafetida and iron, 154. Assafetida mixture, 154. Alkaline tincture assafetida,

155. Tincture assafetida and soot, 156. Assafetida and castor, 156. Belladonna and camphor, 171. Monobromated camphor, 195. Bolus castor, 211. Castor pills, 211. Skunk cabbage, 268. Soot pills, 301. Compound galbanum pills, 303. Mixture lactucarium, 368. Anti-hysteric water, 393. Musk, 402. Pills opium and musk, 420. Calabar bean, 437. Mixture rue and squill, 502. Liniment oil of amber, 561. Sumbul, 565. Compound powder valerian, 577. Vanilla, 580. Valerianate zinc, 592.

Ileus. Hemlock oil, 245.

Impetigo. Lotion hydrocyanic acid, 94. Glycerin, 312. Compound powder sulphur, 562. Powder iodide sulphur, 565. Ointment oxide zinc and opium, 590.

Iritis. Turpentine mixture, 572.

Ischuria. Assafetida and opium, 154.

Issues. Ointment of cantharides, 200. Elemi plaster, 271.

Itch. Carbolic acid lotion, 91. Sulphuric acid ointment, 100. Lime water and sulphur, 186. Lime ointment, 186. Chlorine ointment, 223. Lotion corrosive sublimate, 333. Ointment red oxide mercury and sulphur, 343. Tincture sulphuret potass., 475. Compound lotion sulphuret potass., 476. Ointment carbonate potass., 461. Soap and sulphur, 516. Decoction stavesacre, 554. Compound powder sulphur, 562. Sulphur ointment, 563. Compound sulphur ointment, 564. Ointment white helleborre, 583. Sulphuret sodium, 549.

Jaundice. Terebinthinated ether, 106. Barberry, 174. Compound wine centaury, 215. Acetate of potassium, 453. Senna and guaiacum, 531.

Joints, Affections of. Pipsissewa beer, 221. Compound decoction guaiacum, 317. Pills guaiacum and antimony, 318. Ointment calomel and squill, 337. Oil laurel, 370.

Kidneys, Affections of. Gallic acid mixture, 93. Emulsion manna, 387. Carbonate sodium, 544. Ointment turpentine, 572. Uva ursi, 576.

Labor. Contrayerva mixture, 247. Ergot and its preparations, 273. Decoction cotton root, 315. Compound powder borax, 542.

Laryngitis. Creasote pills, 252. Liniment croton oil, 417. Plaster croton oil, 417.

Leucorrhœa. Injection gallic acid, 93. Tannic acid, 100. Whytt's pills, 110. Alum, 116. Electuary catechu, 213. Peruvian bark and isinglass, 227. Wine Peruvian bark and iron, 232. Cubebs and ergot, 255. Compound powder ergot, 273. Infusion black purslane, 276. Compound pills carbonate iron, 281. Lozenges iodide iron, 289. Bath iodide iron, 291. Ointment iodide iron, 291. Black oxide iron, 294. Electuary black oxide iron, 294. Sulphate iron, 297. Syrup sulphate iron, 298. Solution tartrate iron and potass., 287. Injection, 302. Tincture galls, 305. Avens, 311. Compound powder guaiacum, 304. Calomel and catechu, 336. Saturated tincture iodine, 351. Injection rhatany, 365. Injection subacetate lead, 446. Chlorate potassium, 462. Iodide potass., 466. Decoction oak bark, 481. Pills turpentine and guaiacum, 571.

Lepra. Pills arsenic and opium. 89. Iodide arsenic, 150. Chloride arsenic, 150. Donovan's solution, 151. Barytic liniment, 169. Mudar, 189. Chlorine oil, 223. Mixture tincture colocynth, 244. Carburet iron, 283. Ethereal solution bibromide mercury, 332. Ointment naphthalin, 407.

Lichen. Carburet iron, 253. Ointment glycerin, 312. Ointment calomel and camphor, 337. Ointment cyanide mercury, 338.

Lips, Excoriation of. Spermaceti lip salve, 218.

Liver, Affections of. Lotion hydrocyanic acid, 94. Muriatic acid pediluvium, 96. Terebinthinated ether, 106. Ointment tartar emetic, 144. Belladonna, 170. Blue pill and jalap, 328. Blue pill and quinia, 328. Compound mercurial pill, 328. Compound cathartic pills, 273. Calomel and jalap, 336. Tartrate of potassium and rhubarb, 477. Mixture tartrate potassium, 477.

Lumbago. Camphor ointment, 195. Spirit turpentine mixture, 414.

Lungs, Affections of. Syrup chamomile, 139. Tartar emetic, 142. Tartar emetic and opium, 143. Lotion tartar emetic, 144. Ointment tartar emetic, 144. Syrup antimonial wine, 145. Fig coffee, 299. Syrup asparagus, 153. Compound tincture benzoin, 144. Hemlock and ipecacuanha, 244. Compound pills henbane, 347. Ipecacuanha and antimony, 355. Myrrh and ipecacuanha, 405. Naphthalin, 407. Tar water, 442. Solution cyanide potass., 462. Decoction and syrup seneka, 529. Storax, 559. Balsam tolu, 165. Coltsfoot, 575.

Mammæ, Affections of. Ointment carbonate ammonium, 127. Fomentation sal ammoniac, 127. Cataplasm sal ammoniac, 128. Lime water and oil, 186. Charcoal, 203. Ointment turpentine, 572. Ointment oxide zinc and lycopodium, 590.

Mania. Compound pills columbo, 190. Pills foxglove, 265.

Marasmus. Jelly orange leaves, 159.

Measles. Infusion safflower, 207. Spermaceti mixture, 217.

Menorrhagia. Pills gallic acid, 93. Pills tannic acid and opium, 100. Alum, 116. Compound bolus catechu, 213. Peruvian bark and isinglass, 227. Ergot, 272–3. Infusion black purslane, 276. Pills ammoniated iron, 280. Injection sulphate iron, 298. Aromatic alum whey, 119.

Mercurial Disease. Mixture sulphuret potass., 476. Sulphur mixture, 563.

Milk, To Increase Secretion of. Compound powder fennel, 300.

Milk, To Retard Secretion of. Bolus acetate potassium, 453. Pills acetate sodium, 539.

Mouth, Affections of. Vinegar gargle, 86. Muriatic acid gargle, 96. Collutory nitric acid, 97. Alum, 116. Chlorine gargle, 188, 222. Collutory balsam Peru, 165. Collutory carbonate potassium, 459. Boracic acid wash, 90. Sal ammoniac, 127. Phosphate of calcium, 187. Decoction of New Jersey tea, 215. Goldthread, 250. Creasote mixture, 252. Myrrh, 405.

Mollities Ossium. Phosphate calcium, 187.

Muscles, Rigidity of. Ointment iodine and oil tobacco, 353.

Nausea. Clove cataplasm, 209. Clove bag, 309. Pennyroyal, 321. Compound infusion mint, 394. Spice plaster, 594. Mixture carbonate potassium, 460.

Nephritis. Compound decoction oatmeal, 163. Infusion carrot fruit, 207. Emulsion bicarbonate sodium, 540. Compound ointment of turpentine, 572. Compound powder of uva ursi, 576.

Neuralgia. Pills of arsenic and opium, 89. Aconitia, 104. Aconite plaster and lotion, 103. Valerianate ammonium, 131, 597. Plaster bella-

donna, 173. Oil benzoin, 174. Emulsion cantharides, 197. Chloral hydrate, 222. Bolus castor, 211. Liniment chloroform, 224. Codeia, 237. Tincture colchicum, 239. Colchicum and camphor, 241. Creasote pills, 252. Carbonate iron, 281. Gelsemium, 307. Mixture tincture guaiacum, 319. Calomel and opium, 337. Compound pills henbane, 347. Lotion cherry-laurel, 371. Sulphate morphia, 401. Turpentine mixture, 414. Opiated turpentine liniment, 415. Carbonate lead ointment, 447. Lotion chloride lead, 448. Lotion cyanide potassium, 463. Ointment cyanide potass., 463. Solution chlorate potassium, 461. Tannate of quinia, 488. Extract cevadilla, 503. Extract tobacco, 566. Ointment tobacco, 567. Veratria, 580. Valerianate zinc, 592.

NERVOUS DISORDERS. Valerianate ammonium, 131, 597. Valerianate bismuth, 176. Camphor and musk, 192. Camphor water and Hoffmann's anodyne, 192. Monobromated camphor, 195. Peruvian bark and valerian, 231. Pills ammoniated iron, 280. Infusion hops, 325. Compound powder henbane, 347. Musk, 402. Wild cherry bark, 478. Compound pills sulphate quinia, 486. Oxide zinc, 589. Cyanide zinc, 587. Ferrocyanide zinc, 588. Chloride of zinc, 586. Valerianate zinc, 593.

NIPPLES, EXCORIATED. Oil elaterium, 270. Glycerin, 312. Mammillary lotion, 164. Opium and lime water, 424. Borax, 542.

NODES, VENEREAL. Mercurial plaster, 330

NUX VOMICA, POISONING BY. Sulphuric ether and turpentine, 106.

NYCTALOPIA. Calomel, antimony, and henbane, 334.

ŒDEMA. Fomentation arnica, 149.

ONYCHIA. Corrosive sublimate and zinc, 332. Red oxide mercury, 342.

OPHTHALMIA. Alum collyrium, 117. Alum curd, 117. Acetate ammonium, 124. Antimonial wine, 144. Nitrate silver, 146. Ointment nitrate silver, 147. Chloride gold, 160. Chloride barium, 168. Glycerite of bismuth, 176. Sulphate cadmium, 181. Camphor collyrium, 195. Solution of conia, 246. Verdigris and alum, 258. Verdigris ointment, 258. Collyrium sulphate copper, 261. Mucilage quince-seeds, 262. Eyebright, 277. Ointment Prussian blue, 288. Ointments red and yellow oxide of mercury, 342, 343. Ointment red oxide of mercury and zinc, 343. Yellow root, 346. Wine opium, 426. Collyrium acetate lead, 445. Collyrium subacetate lead, 445. Ointment subacetate lead, 447. Collyrium biniodide potass., 469. Compound lotion iodide potass., 469. Collyrium caustic potass., 452. Sulphate of quinia and sodium, 485. Ointment oxide zinc, 590. Ointment oxide of zinc and calomel, 590. Mixture ferrocyanide zinc, 588. Collyrium sulphate zinc, 591.

OPHTHALMIA, GONORRHŒAL. Mercurial lotion, 327.

OPIUM, POISONING BY. Vinegar coffee, 237.

ORCHITIS. Mixture chloride barium, 168.

OTORRHŒA. Sulphate of cadmium, 181.

OZÆNA. Angelica, 136. Chloride lime, 188. Mercurial gargle, 327. Compound powder sulphate mercury, 344.

PALPITATION. Syrup asparagus, 153. Powder foxglove, 264. Wild cherry bark, 478.

PANNUS. Compound powder seneka, 529. Pills seneka, 529.

PARALYSIS. Pyro-oleous carbonate ammon., 127. Infusion horseradish, 148. Extract arnica, 149. Assafetida, 153. Brucia, 178. Nitrate camphor, 195. Cantharides and Cayenne pepper, 197. Oil of euphorbium,

277. Ignatia, 350. Nux vomica, 408. Tincture nux vomica, 408. Pills opium and nitrate silver, 420. Phosphorated ether, 437. Lotion mustard, 538. Bath common salt and arnica, 546. Strychnia, 557. Iodate strychnia, 558.

Peripneumonia. Golden sulphuret antimony, 141. Powder foxglove, 264. Pills calomel and antimony, 336.

Periostitis. Compound mercurial ointment, 329.

Phimosis. Solution sulphate copper, 261.

Phthisis. Mixture hydrocyanic acid, 93. Alum and benzoic acid, 117. Mixture chloride barium, 168. Belladonna, 170. Hypophosphites, 185. Iodide calcium, 185. Iceland moss, 218. Carrageen, 224. Electuary Peruvian bark and sulphur, 189. Creasote, 252. Pills sulphate copper, 260. Foxglove, 264. Compound pills of henbane, 347. Ipecacuanha and nitrate potassium, 355. Artificial goat's milk, 367. Locatelli's balsam, 165. Myrrh and Canada balsam, 405. Compound extract myrrh, 406. Griffith's mixture, 406. Acetic turpentine liniment, 415. Acetate lead, 444. Mixture iodide potassium, 406. Chlorate potassium, 461. Acetate of morphia, 398. Wine of tar, 442. Wild cherry bark, 478.

Pleuritis. Infusion of pleurisy root, 152. Nitrate of camphor, 195. Mixture foxglove, 266. Cataplasm long pepper, 440.

Pneumonia. Benzoic acid and ipecacuanha, 89. Mixture foxglove, 266. Gelsemium, 307. Powder ipecacuanha and chloride ammonium, 355. Powder ipecacuanha and antimony, 355. Sumbul, 566.

Porrigo. Ointment nitric acid, 97. Sulphurous acid, 100. Lotion corrosive sublimate and copper, 332. Ointment calomel and acetate copper, 337. Ointment nitrate mercury and lead, 340. Ointment sulphate mercury, 344. Ointment oxide manganese, 386. Banyer's ointment, 449. Compound lotion sulphuret potass., 476. Powder iodide sulphur, 565.

Prurigo. Fomentation opium, 424. Ointment carbonate sodium, 445. Powder iodide sulphur, 565.

Pruritus. Lotion carbonate potassium, 460. Lotion borax, 543. Lotion carbonate sodium, 545. Lotion chlorate sodium, 545.

Psoriasis. Arsenic and pepper pills, 89. Ointment nitric acid, 97. Ointment subnitrate bismuth, 176. Compound powder anthracokali, 205. Decoction soot, 301. Naphthalin ointment, 407. Ointment poke, 438. Tar ointment, 443. Compound lotion sulphuret potassium, 476. Lotion tobacco, 567. Ointment tobacco, 567.

Psorophthalmia. Camphor ointment, 195. Ointment sulphate copper, 261. Ointment red oxide mercury, 342. Ointment red oxide mercury and cinnabar, 343. Ointment common salt, 546. Compound sulphur ointment, 564.

Pyrosis. Alkaline wine aloes, 112. Oxide of silver, 148. Charcoal and quassia, 204. Compound pills kino, 364. Mixture carbonate potassium, 460.

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